

英汉双语版

最新国际标准
解剖学术语

Wolf-Heidegger's
Atlas of Human Anatomy
沃氏人体解剖学图谱

· 第5版 · 第1卷

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Systemic Anatomy, Body Wall,
Upper and Lower Limbs

系统解剖学，体壁，上肢和下肢

KARGER

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Wolf-Heidegger's Atlas of Human Anatomy

Wolf-Heidegger's Atlas of Human Anatomy, revised, updated and modernized completely by Prof. Dr.med. Petra Köpf-Maier, appears new in two volumes in an all-English version using the most current International Anatomical Terminology (Terminologia Anatomica). This 5th edition of this classic of anatomy is the result of intensive collaboration between recognized scientists, dissectors and graphic artists. The high-class illustrative material, one of the main features of the standard atlas, has been printed in color throughout and extended by providing a large amount of anatomical sections, X-ray plates, computed tomograms and magnetic resonance images as well as ultrasound pictures. This has been done taking the enormous clinical importance of modern imaging techniques into consideration. Placing the respective anatomical sections and radiologic images directly opposite each other should facilitate the interpretation of CT and MRI scans and open new approaches to a better understanding. A successful clinical approach without an established knowledge of macroscopic anatomy including sectional anatomy is no longer feasible today.

Wolf-Heidegger's Atlas of Human Anatomy is aimed at students of human medicine and dentistry in the preclinical and clinical stages of their studies as well as clinical practitioners. It conveys an as lifelike as possible aspect of the organ systems of the human body and presents sectional anatomy and radiological pictures in direct opposition to each other.

沃氏 人体解剖学 图谱

沃氏人体解剖学图谱的更新、修订和补充工作由医学博士Petra Köpf-Maier教授负责完成。本次修订的英文版分上下两卷，文中名称及术语根据现代国际解剖学标准术语学 (Terminologia Anatomica) 进行了更改。经典的第5版沃氏人体解剖学图谱是解剖学领域著名的形态学家、解剖学家和影像描记学家集体智慧的结晶，归类科学、布局合理。本书提供了大量高质量、高清晰度的标准解剖学图片，不仅包括一般人体解剖学，还因考虑到现代影像技术在临床工作中的重要性而为读者展示了大量解剖学断层影像、X线片、CT和MRI及超声影像学图片。为使读者认知和掌握人体解剖结构与临床影像学之间的紧密联系，书中将人体解剖学结构图与影像学表现一一对应排放。

今天，完备的巨视解剖学包括断层解剖学知识已成为成功的临床实践之基础。

本书旨在为医学生和齿科医学生临床前期和临床期以及开业医师提供学习之用，为每位医学工作者提供近乎活体组织系统人体解剖、断层解剖和放射影像学图片。

KARGER

Wolf-Heidegger's

Atlas of Human Anatomy

沃氏

人体解剖学图谱

(第5版)

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Homage to Those Who Bequeathed Their Bodies to Science

‘Hic locus est ubi mors gaudet succurrere vitae’

‘This is the place where death delights in helping life’
(Inscription above the Anatomical Theatre of Bologna)

The present atlas of human anatomy shall not begin without paying due homage and returning thanks to those who freely bequeath their bodies to anatomy. Such donations testify to an admirable, unselfish, and idealistic sense of sacrifice and nothing can compensate for the invaluable service rendered to science and society. Anatomy and medicine owe these individuals a tremendous debt of gratitude. By bequeathing their bodies, they enable medical students to learn through real observation and direct ‘grasping’, and even

now, at the end of the twentieth century, there is no alternative to this. Thus, even beyond death, these altruistic people help the living – medical students, physicians, and their patients alike. This is how the above inscription should be interpreted. Students should make every endeavour to be worthy of these voluntary and generous body donations by respecting and honoring the dead as well as by working hard and learning eagerly.

向为科学捐献遗体者致敬！

‘Hic locus est ubi mors gaudet succurrere vitae’

“这是一个能使死者永存的地方”

(以上是博洛尼亚解剖室前的碑铭)

在翻阅这本人体解剖学图谱前，我们首先应该感谢那些自愿捐献遗体者，并向他(她)们致以崇高的敬意。他(她)们是多么令人敬佩和大公无私，并且充满着自我牺牲的精神、理想和信念；现代医学的发展足以证明：这些捐赠的遗体者对人类社会的进步和医学科学的发展来说是一笔难以用金钱来衡量的财富。人体解剖学的发展更是离不开遗体捐献者们的巨大贡献。他(她)们的遗体使医学生能通过真实的观察和切身的体验，学习和掌握解剖学知识，这一学习方式和研究手段在二十世纪末是无法用其他方式替代的。这些无私的人们在去世后仍然热心帮助活着的人——医学生、医生和病人。这就是为什么要引用以上碑文的原因。学生们只有尊敬这些死者并竭尽全力去学习和工作，才能无愧于这些慷慨无私的遗体捐献者。

Preface to the 5th Edition

Macroscopic anatomy is a fundamental branch of medicine without which clinical facts cannot be understood.

Throughout history, the importance of anatomy for medicine – and thus for medical studies – has fluctuated considerably. Five hundred years ago, at the end of the Renaissance, Leonardo da Vinci and Andreas Vesal laid the foundation stones of modern anatomy and modern medicine. In those days, anatomy – then exclusively macroscopic – was the only fundamental speciality medical students were confronted with during their studies, along with the clinical subjects internal medicine, surgery and botany (in the meaning of use of herbal drugs).

The first half of the twentieth century saw the development of microscopic anatomy besides macroscopic anatomy; physiology became an independent speciality and physiological chemistry and biochemistry made huge progress. Research in these fields provided new knowledge on functional and molecular interactions in the mammalian organism which fundamentally altered our understanding of diseases and opened new perspectives in clinical diagnosis and therapy. As a consequence of these developments, macroscopic anatomy was somehow relegated to the background during the 1960s and 1970s, and seemed to have retained its essential importance only for surgical specialities.

Apart from these developments, new diagnostic imaging technologies have become clinically established in the second half of the twentieth century: computed tomography, magnetic resonance imaging, and ultrasonography. These imaging techniques opened up new visions of the morphology of the living organism, enabled a very detailed identification of structures and thus laid the foundation stone of rapid and unexpected progress in clinical diagnosis. However, the interpretation of normal and pathologically altered structures in two-dimensional images of the human body with all these techniques demands extremely precise anatomical knowledge. In recent years, this has led to the revival and to a considerable increase in the significance of macroscopic anatomy both for clinical medicine and the education of medical students.

Successful clinical work without well-founded knowledge in topographical and sectional anatomy is thus no longer possible. This is the reason why the editor urges present and future medical students to study macroscopic anatomy intensively.

As a matter of fact, it is the establishment of the new imaging techniques in clinical medicine that prompted this new revised version of Professor Wolf-Heidegger's *Atlas of Human Anatomy*, which had been continued by H. Frick, B. Kummer, and R. Putz in its 4th edition, and the supplementation of its 5th edition with numerous anatomical sections, computed and magnetic resonance imaging tomograms and ultrasonograms. Such a new design of an atlas of the anatomy of the whole human body is only possible with the collaboration of many enthusiastic forces. Thus I am deeply indebted to Dr.

R. Andresen and Priv.-Doz. Dr. D. Banzer (Berlin) for most of the new radiographs as well as the computed and magnetic resonance tomograms included in this atlas. Prof. Dr. G. Bogusch (Berlin), Prof. Dr. E. Fleck (Berlin), Dr. M. Jäckel (Göttingen), Dr. H. Kellner (Munich), Priv.-Doz. Dr. T. Riebel (Berlin), Priv.-Doz. Dr. C. Sohn (Heidelberg), Dr. D. Zeidler (Berlin) and Prof. Dr. W.G. Zoller (Munich) contributed some further radiographs, tomograms and ultrasonograms for which I would like to thank them.

I am moreover deeply indebted to Prof. Dr. M. Herrmann (Ulm) who provided the anatomical sections for most of the computed and magnetic resonance tomograms of the present atlas and thus considerably enriched it. The sections on which these illustrations are based were prepared and photographed by Mr. E. Voigt (Ulm), whom I would like to thank as well.

Valuable help in translating the Latin terms of the original Latin nomenclature version into English equivalents was contributed by Prof. A.W. English, Ph.D. (Atlanta, Georgia, USA). I thank him very much for his engagement.

I also express my thanks to Mrs. G. Heymann-Monhof, Mr. H. Jonas, Mrs. H. Heinen, Mrs. I. Tripke, Mrs. C. Naujok and Mr. F. Geisler who prepared about 230 new anatomical drawings for the present edition.

My special thanks go to Dr. h.c. Th. Karger for his constructive collaboration during the past years. Dr. Karger always lent an understanding ear to my concepts, which were often difficult and expensive to realize, and was a partner whose expert advice and understanding always helped me in my work with the atlas. Many thanks in particular to Mr. B. Pfäffli as well as to all the personnel of S. Karger Publishers and Neue Schwitzer AG who helped in the production of Wolf-Heidegger's atlas.

Mrs. M. Risch, my secretary, has been a great and dependable help over the past years, which has eased my work in many respects. I would like to thank her as well.

This new edition of Wolf-Heidegger's *Atlas of Systematic Human Anatomy* has been supplemented by numerous new anatomical drawings, radiographs, tomograms, ultrasonograms and anatomical sections. As the editor, I am confident that this new edition will indeed 'help one to see' – one of the most difficult things, according to the quote from Goethe, which Wolf-Heidegger chose as the motto for the first edition of his atlas – and that it will give medical students better access to anatomy and clinical medicine:

'What is the hardest of aught? What seemeth the simplest to you:
With your eyes to see that which is in front of your eyes.'

Johann Wolfgang von Goethe,
Distichon 155 of the 'Xenien' (translated by M. Pfister, Berlin)

Berlin, Spring 1999

Petra Köpf-Maier

第5版前言

巨视解剖学是一门医学基础学科，医学科学家对许多临床表现的解释都离不开它。

纵观历史，人体解剖学对医学发展和医学研究的重要性是显而易见的。500年前，文艺复兴末期，Leonardo da Vinci 和 Andreas Vesal 为现代解剖和现代医学奠定了基石。在那个时期，解剖学尤其巨视解剖学——是伴随医学生在学习临床科目如内科学、外科学和植物学(用于中药的应用)期间，唯一的一门基础学科。

20世纪前50年，伴随着巨视解剖学的发展，微视解剖学在生理学的发展中担当着特殊的角色，生理化学和生物化学也得到巨大发展。通过对这些领域的研究，我们获得了有关哺乳动物组织功能和分子间相互作用的新知识。这不但改变了我们对疾病的认识，而且为我们在临床诊断和治疗方面提供了新的思路。虽然如此，但不知何故，在1960年至1970年间，巨视解剖学被降到次要的位置，似乎仅保留了它对外科学专业的基本价值。

进入20世纪50年代以后，临床影像诊断学逐步建立和发展起来，CT、MRI和超声波等技术的应用为我们提供了新的视觉图像，使我们能详细准确的识别人体结构，从而为临床诊断学的飞速的发展奠定了基石。但是，对于人体组织结构的生理变化和病理变化，通过这些技术在二维影像中予以解释，有赖于非常准确的解剖学知识。因此，巨视解剖学在临床医学中的重要性得到了恢复。

没有很好的局部解剖学和断层解剖学知识，在临床工作中要取得成功是不可能的。这正是编者极力主张：现在和将来的临床医学学生必须深入细致的学习巨视解剖学。

由于影像诊断学的建立，从而使沃氏人体解剖学图谱有了新的修订版。第5版在H.Frick、B.Kummer和R.Putz编写的第4版基础上，增补了大量断层解剖、CT、MRI和超声图片。对整个人体解剖学图谱内容的扩充和新的编排方式，使得许多积极因素的协同作用得到充分发挥。图谱中绝大多数新的X线片如CT、MRI图片由R.Andresen博士、柏林的D.Banzer博士提供，对此我深表感激。柏林的G.Bogusch教授(博士)和E.Fleck博士、哥廷根的M.Jäckel博士、慕尼黑的H.Kellner博士、柏林的T.Riebel博士、海德堡的C.Sohn博士、柏林的D.Zeidler博士和慕尼黑的W.G.Zoller教授(博士)，提供了一些更深层次的X线片、断层X线片、超声图像，对此我深表感激。

我更深深感谢沃尔姆的M.Herrmann教授(博士)，本书断层解剖中绝大多数CT和MRI图片由他提供，极大地丰富了本书的内容。断层图片由沃尔姆的E.Voigt先生拍摄并制作，对他我同样深表感谢。

在将原文拉丁术语翻译成为英文的过程中，美国A.W. English教授给予我们大力的协助，我非常感谢他。

我还要感谢G. Heymann-Monhof女士、H. Jonas先生、H. Heinen女士、I. Tripke女士、C. Naujok女士和F. Geisler先生，他(她)们为本书绘制了大约230幅新的解剖图片。

特别要感谢Th.Karger博士在过去对我们的鼎力协助，他总能明白我的意图，尽管有时实现起来很困难，而且花费很大。他专业性的建议和理解在我编制图谱的工作中作用很大。我还要深深感谢B. Pfäffli先生以及S.Karger出版社和新斯克怀特股份公司的全体成员，他们在沃氏图谱的出版中给予了大力支持。

我的秘书M.Risch女士，给予我大量的值得信赖的帮助，在许多方面简化了我的工作，我同样深表感谢。

这本新版沃氏系统人体解剖学图谱补充了大量新的解剖绘图、X线平片、断层X线片、超声图像和断层解剖图片。作为编者，我确信，新的版本将“真正帮助每个人看到”——最难看到的东西，正如Goethe所说，作为沃氏第1版的座右铭：本书还将在解剖学和临床医学上为医学生提供更好的学习途径。

“什么是最难的？什么看上去最简单：用你的眼睛看你眼前的事物。”

Petra Köpf-Maier

1999年春于柏林

Preface to the 1st Edition

«Was ist das Schwerste von allem? Was dir das Leichteste dünket: Mit den Augen zu sehn, was den Augen dir liegt. »*

Accustomed during his school years to place greater trust in the written word than in his own senses, the young medical student in his first pre-clinical term is faced with a problem which Goethe aptly describes as 'hardest of all': He has to learn how to see. To teach him to do so, by the aid of anatomical preparations and plates as the most effective means at his disposal, is the foremost task of the pre-clinical instructor. The aim of the present Atlas is to give to the medical student and to the physician wishing to revise his anatomical knowledge a picture, as true and exact as possible, of the organs of our human body. The drawings were made partly from specimens preserved in the large collection of the Basle Anatomical Institute, partly from special preparations. Nearly all the plates in the section on muscles were drawn from fresh preparations in order to exclude the deformities caused by preservation. Our aim was always to avoid individual peculiarities and, by using a larger number of similar preparations, to produce as general and universal a picture as possible. With a few exceptions, noted in the legends, the right side of the body was always chosen in all bilaterally symmetrical organs or parts.

We were for a long while undecided whether or not the illustrative material should be accompanied by a short written text. As stated above, we are of the opinion that the Atlas is the primary aid in anatomical instruction, but it neither can nor should be a substitute for the detailed textbook and the spoken word; these are indispensable in preparing the student for what he is to see and in fixing what he has seen firmly in his mind. Students tend to regard a short Atlas text as a source of information sufficient for their needs, but it can never deal exhaustively with all noteworthy and necessary aspects of the subject; we therefore decided finally to publish the present volume without text, but to pay great attention to the labelling of the separate illustrations. The Atlas can thus be used in combination with any textbook of anatomy. On the other hand, for the sake of clarity, care was taken not to overload the separate plates with too many pointers; thus, parts and details which have already been shown are not re-labelled in plates in which they are not important for purposes of instruction. Sketches of the body surface, copied partly from well-known sculptures, have been inserted beside the plates showing the superficial muscular layers; it is hoped that these will help the student and qualified doctor to fit the muscle relief into the body of the patient. X-ray photographs of all important skeletal parts and junctures have been included with the intention of preparing the student for a form of examination which is of vital importance in clinical medicine and only possible on the basis of

a sound knowledge of the normal anatomical picture. We had also planned, and partly completed, some treatment of general morphology, constitutional types, evolution, and the mechanics of joints, also a summarising survey in tabular form of the musculature; but all this had to be omitted in order to keep the volume of handy size and accessible price for the student.

Pending the establishment – we hope at a not too distant date – of a standard anatomical nomenclature, internationally recognised and scientifically and linguistically acceptable, we have made use in the present work of the Jena nomina anatomica; this is the terminology most widely used in the German-speaking countries. The Basle nomenclature has, however, been substituted for a few linguistically incorrect or in our opinion inappropriate terms.

I wish to take this opportunity of expressing once again my sincere thanks to the publisher, Dr Heinz Karger, who by his energy and expert knowledge, his optimism and kindly, confident encouragement has made possible the wearisome and costly realisation of this work. I wish to thank further my faithful artistic collaborators: Mr Adolph Dressler (junctures), Mr Rolf Muspach (osteology), and above all Mr Robert Schlumpf (myology), who as sculptor with many years' dissecting room experience has in the course of our prolonged collaboration far surpassed his original function as artist and become a knowledgeable and indispensable scientific colleague, invaluable at every stage of the work from the preparation of muscle specimens to the typographical composition of the plates and the correction of proofs. For untiring and invaluable help I owe sincere thanks to my former Viennese assistant, Dr Arthur von Hochstetter (now Fribourg, Switzerland). Nearly all the X-ray photographs I owe to the kindness of Dr Emil A. Zimmer (Basle/Berne). For important suggestions and active help I wish to thank in particular my kind and highly esteemed anatomy instructor, Professor Eugen Ludwig, M.D. (Basle), and also Dr Walter Bejdl (Vienna/Basle), Dr Leopold Drexler (Vienna), Mr Willy Jäggi of S. Karger Ltd., Dr Walter Krause (Vienna), Dr Kurt S. Ludwig (Basle), Dr Carl Rudolf Pfaltz (Basle), Professor Joseph Tomasch, M.D. (Kingston, Canada; formerly Vienna/Basle), Mr Armin Wolf, dissector (Basle), and Dr Wolfgang Zürcher (Basle).

In deep gratitude I wish finally to pay tribute to the memory of my mother who by her devoted and untiring energy made it possible for me, after the early death of my father, to follow the profession of my choice and thus to bring this Atlas into being.

Basle, Autumn 1953

Gerhard Wolf-Heidegger

* J.W. Goethe: 'Xenien.' From the posthumous papers. Weimar Edition, Vol. 5, part 1, p. 275, No. 45, 1893.

第 1 版前言

多年在校学习,使 Goethe 养成了对书面文字的信任超过自己直觉的习惯,这位年轻的医学生在第一年临床实习前面临一个问题——他曾准确描述为“最困难的”是:他必须学会如何观察。临床实习前期,教师最重要的任务就是让学生学会自由使用解剖标本和解剖图谱。这本图谱的作用正是给那些希望纠正自己解剖学知识的医学生和临床医生,提供尽可能真实和准确的人体组织器官图片。部分图片是根据巴塞尔解剖学会大量收藏的标本绘制,部分标本是专门制作的。为了避免保存过程中造成的残缺,肌肉部分几乎所有图片都是根据新鲜标本绘制的。我们用大量近似的标本,绘制尽可能一般和通用的图片,目的是要避免个体差异性。个别例外的,图中有注释。在所有双侧对称的器官、系统和部分,均选择身体右侧。

我们很长一段时间都不能确定这本图谱是否需要配附简要的文字说明。正如上文所述,我们认为,图谱是用来帮助解剖学教师进行教学的,它不应该成为内容详尽的课本和讲稿的替代品,它是学生进行预习和对要看的标本加深印象不可缺少的。学生喜欢把图谱的解释性文字作为他们所学知识的主要来源。但它并不能对所有重要的、基本的各个方面都讲解的很详细。因此,最终我们决定出版这本没有解释性文字的图谱,但特别注意给每幅图片标注说明。本书可与任何解剖学教材配合使用。另外,为了清晰,我们尽量避免给每幅图片配过多的注释,所有局部和系统以前作过标注的、对于教学意义不大的部分,没有再作注释。插入浅层肌肉图中的人体体表的绘图,部分是临摹著名的雕塑,希望这些可以给学生和资格医师提供方法来缓解病人的肌肉紧张。所有重要的骨关节 X 线片是为学生学习 X 线检查方法做准备。X 线检查方法是临床医学中极为重要的部分,是掌握正常解剖定位知识仅有的基础。我们的计划已完成了一些,如关节的一般形态学治疗、结构类型、进化演变和机械力学,还有肌肉系统表格形式的概括性调查。但是,为了保证本书的方便使用和学生可接受的价格,这些必须省略。

在编写过程中,我们一直希望在不久的将来,我们现用的 Jena 解剖学术语能得到国际公认,并在科学上和语言学上被接受,现 Jena 命名法最大范围仅用于德语国家,而 Basle 命名法在语言上有一些错误和我们习惯上的不正确的用法已被替代。

借此机会,我再一次对出版商 Heinz Karger 博士表示真诚的感谢,他用自己丰富的专业知识和活动能力,乐观、友好、自信的精神鼓励我,使实现这项乏味且代价高昂的工作成为可能。我更要感谢我忠实的美工 Adolph Dressler 先生(关节部分)和 Rolf Muspach 先生(骨骼部分);同时,我要感谢最重要的 Robert Schlumpf 先生(肌学部分),他是雕刻家,有多年解剖定位的经验,在整个工作过程中,从肌肉标本的制作到图片的排版和校对,使他由最初一名美工成为一个博学而不可缺少的专业伙伴。我的前任助手维也纳的 Arthus von Hochstetter 博士(现在瑞士的 Frigourg)给了我不知疲倦的无私的帮助,我深表感谢。几乎所有的 X 线片都由 Emil A. Zimmer 博士(巴塞尔/伯尔尼)提供。我深深地感谢平易近人的解剖学教授 Eugen Ludwig 博士(巴塞尔)以及 Walter Bejdl 博士(维也纳/巴塞尔)、Leopold Drexler 博士(维也纳)、S. Karger 有限公司的 Willy Jäggi 先生、Walter Krause 博士(维也纳)、Kurt S. Ludwig 博士(巴塞尔)、Carl Rudolf Pfaltz 博士(巴塞尔)、Joseph Tomasch 博士(加拿大金斯敦,以前在维也纳/巴塞尔)、解剖工作者 Armin Wolf 先生(巴塞尔)和 Wolfgang Zürcher 博士(巴塞尔)。

最后,将我深深的感激之情作为对我母亲纪念日的献礼。我父亲早年去世后,母亲用她真挚的爱和不断地鼓励,使我沿着我选择的职业前进成为可能,本书才得以完成。

Gerhard Wolf-Heidegger

1953 年秋,于巴塞尔

Concept of the New Version of the Atlas and Illustration Credits

The present 5th edition of the *Atlas of Human Anatomy*, published in 1954, 1960, and 1972 by Professor Dr. Gerhard Wolf-Heidegger and edited in 1990 by Prof. Dr. H. Frick, Prof. Dr. B. Kummer, and Prof. Dr. R. Putz, has been thoroughly revised in several aspects and supplemented in comparison to the previous four editions.

1. Retained Anatomical Drawings

The classical drawings of the three previous editions prepared by Wolf-Heidegger and his illustrators have been retained, recolored and – in the case of black-and-white drawings – colored didactically in order to make them clear also for beginners. Moreover, most of the figures prepared by Frick, Kummer, and Putz for the 4th edition, were revised and incorporated into the current 5th edition.

2. New Anatomical Pictures

The original illustrations of the previous four editions have been supplemented with about 230 new, mostly topographical drawings. These drawings were realized by six illustrators from Berlin, whom I would like to thank here for their enthusiasm. First of all, Mrs. Gertrud Heymann-Monhof, who possesses the talent to represent anatomical situations both true to detail and in an aesthetically convincing fashion. Mr. Hendrik Jonas drew most of the new illustrations of the locomotor apparatus and the head and succeeded very well in maintaining them in the style of the earlier editions. Mrs. Hildegard Heinen prepared numerous schematized drawings in a didactically clear manner. Other, mostly smaller drawings were done by Mrs. Ilona Tripke; three illustrations whose originals had been lost were painted in water colors by Mrs. Corinna Naujok. Mr. Frank Geisler prepared some new pictures and revised several others of the last edition.

Mrs. Gertrud Heymann-Monhof

Volume 1: Cover picture; Figs. 18, 19, 20, 21, 48b,c, 54b, 59, 60c, 75, 77a,b, 79a, 82, 83, 87a, 134a, 170, 171, 244a, 246a–c, 253, 254

Volume 2: Cover picture; Figs. 79, 95a, 107a, 113, 115b, 118a, 160c, 166, 172, 209a–c, 211b, 227, 243a, 250a,b, 251a,b, 256a–c, 285a, 336a, 342, 352, 382a, 395c

Mr. Hendrik Jonas

Volume 1: Figs. 90a,b, 99a, 103a, 123b, 125a–c, 127a–c, 131a–d, 137b,c, 138a,b, 155a, 163a, 167c–e, 175b, 176c, 177b, 181e, 189a–c, 191a,b, 193c, 196a,b, 200b–e, 201b–e, 209b, 213b, 220b, 221a,b, 225a,b, 226b, 249b,c, 250a,b, 257a–c, 280b

Volume 2: Figs. 264a,b, 265a, 276b, 277b, 281a,b, 290a,b, 292a, 321a,b, 324b, 325b, 329a,b, 332a,b, 368a, 369a,b, 394a,b, 395a, 399a

Mrs. Hildegard Heinen

Volume 1: Figs. 40b,c, 41b,c, 67a,b, 69b,c, 71c, 73a

Volume 2: Figs. 95b,c, 106b, 114c, 122b, 123b, 137a–c, 144a–c, 145a–c, 146a,c, 147a,c, 178b, 212a, 235b,c, 237b, 246b,c, 247a,b, 272a–e, 273a,b, 392a,b,d

Mrs. Ilona Tripke

Volume 1: Figs. 5c, 23b, 24, 63b, 79, 134b, 244b, 248b, 249a

Volume 2: Figs. 45b, 49b, 60a,b, 80a, 81a, 84a,b, 86b, 87b, 88b, 89b, 90b,c, 183c, 184a,b, 199b, 214b–e, 231b, 249, 293a–c, 371d, 379a, 382b, 383b

Mrs. Corinna Naujok

Volume 1: Fig. 252

Volume 2: Figs. 320a,b

Mr. Frank Geisler

Volume 1: Figs. 6a–c, 18, 19, 20, 21

Volume 2: Figs. 27b, 53a,b, 405a

Other anatomical illustrations, that is 3D reconstructions of the coronary arteries (Vol. 2, Figs. 148a–d), were contributed by Prof. Dr. Eckart Fleck and Dr. Helmut Oswald, Deutsches Herzzentrum Berlin. I acknowledge Dr. Martin Jäckel, Universitätsklinik Göttingen, for the laryngoscopic pictures in Volume 2 (Figs. 69a–d) of the present atlas, and Prof. Dr. Dieter Sasse, Universität Basel, for giving us access to the Anatomical Collection of the University of Basel and allowing Hansjörg Stöcklin to photograph the corrosion casts of the pulmonary, hepatic and renal vessels for the present atlas (Vol. 2, Figs. 115a, 119a, 183a, 213c, 214a).

3. Presentation of Imaging Techniques

The present atlas also aimed at giving imaging techniques due attention. Most radiographs, CT¹ and MRI² images published in the previous edition were technically superseded and, thus, replaced by new pictures. Besides conventional radiographs, the editor was anxious to incorporate computed and MRI tomograms of the whole human body and to represent ultrasonography by some selected images. For an anatomist, this could only be achieved by the close collaboration with enthusiastic radiologists: two radiologists from Berlin, Dr. Reimer Andresen and Priv.-Doz. Dr. Dietrich Banzer, Krankenhaus Zehlendorf, Behring-Krankenhaus Berlin. They have both untiringly searched for 'normal' anatomical images, which proved much more difficult and time-consuming than expected. Most MRI tomograms were done by use of a Philips Gyroscan ACS-NT MRI tomograph which had fortunately been installed a few years ago in the Zehlendorf Hospital.

¹ CT = Computed tomography, computed tomogram

² MRI = Magnetic resonance imaging, magnetic resonance image

Nearly 200 radiographs, CT and MRI tomograms as well as ultrasonograms were taken from Dr. Reimer Andresen's and Priv.-Doz. Dr. Dietrich Banzer's 'treasury':

Volume 1: Figs. 3a,b, 7b, 8d, 33b, 36a,b, 37b, 38a,b, 39b, 43, 45d, 51a,b, 55c, 71a,b, 73b, 85b, 87b, 91a,b, 93a,b, 97a,b, 100a,b, 101a,c, 103c, 106b, 120, 121, 123a, 129b, 137a, 139, 144b, 145b, 146b, 147b, 149a-c, 151b, 155b, 156b, 157b, 158b, 159b, 163b, 164b, 166a, 167a, 173a,b, 181f, 185, 188c, 194a,b, 195a-c, 197a,b, 202a-c, 203a-c, 204a,c,e, 205, 208b, 209a, 210a,b, 247a,b, 251, 258c,d, 259b, 260b, 261b, 262b, 263b, 264b, 265b, 269, 272b, 273b, 274b, 275b, 276a-c, 281a,b

Volume 2: Figs. 5, 7, 12b, 26c,d, 41b, 43c, 53c,d, 59a, 61a,b, 71a-c, 72a, 75a, 78, 110a, 118b, 119b, 126, 127, 128a, 129a, 130a, 131a, 156a, 157a, 159a,b, 175a-c, 182a,b, 186b,d, 188b, 189c,d, 194b, 197a,b, 198b, 201a,b, 203b, 208c, 215a-e, 217a,b, 218c, 219, 221, 223b, 224b, 229, 244b, 253a,b, 255a,b, 257a-c, 259a-c, 261a,b, 271b, 278a,b, 287a-c, 305, 336b, 339, 341, 343, 347, 349, 367b, 378b, 385a,b, 387a,b

Moreover, I gratefully acknowledge the following colleagues for other radiographs and ultrasonograms:

Prof. Dr. Eckart Fleck and Dr. Helmut Oswald,
Deutsches Herzzentrum Berlin:

Volume 2: Figs. 136a-c, 138a-h, 146b,d, 147b,d

Dr. Martin Jäckel, HNO-Klinik, Universität Göttingen:

Volume 2: Figs. 9, 11, 395b, 406a-c, 407a-c

Dr. Herbert Kellner, Medizinische Poliklinik,
Klinikum Innenstadt, Universität München:

Volume 1: Fig. 173c

Priv.-Doz. Dr. Thomas Riebel, Strahlenklinik,
Virchow-Klinikum, Humboldt-Universität Berlin:

Volume 1: Fig. 177a

Priv.-Doz. Dr. Christof Sohn, Frauenklinik,
Universität Heidelberg:

Volume 2: Figs. 74a, 238b, 242a-d, 245b,c

Dr. Diethmar Zeidler, dentist, Berlin:

Volume 2: Figs. 40e,f

Prof. Dr. Wolfram Zoller, Medizinische Poliklinik,
Klinikum Innenstadt, Universität München:

Volume 2: Figs. 185a, 186c, 199c, 210e, 218b, 236b,c

I thank Prof. Dr. Gottfried Bogusch, formerly Institut für Anatomie der Freien Universität Berlin, now Humboldt-Universität Berlin, for giving me the permission to inspect the collection of radiographs and tomograms set up by him and to use the following pictures for the atlas:

Volume 1: Figs. 194a, 199a,b, 214b, 222b

Volume 2: Figs. 23c, 59b, 73a, 74a, 107a, 158a,b, 160a,b, 161a,b, 176b, 213a, 222b, 225b, 278c,d, 301b, 302a,b

4. Anatomical Sections

In order to facilitate the understanding of the radiological sections (CTs and MRIs), the present atlas was designed to enable direct comparison with anatomical sections. While many institutes of anatomy pay attention to sectional anatomy, only few institutes possess complete series of sections of the whole human body. I would like to thank very much Prof. Dr. Martin Herrmann and Mr. Ernst Voigt, Abteilung Anatomie der Universität Ulm, for these illustrations; Mr. Voigt prepared and photographed all the sections.

A total of 90 anatomical sections contributed by Prof. Dr. M. Herrmann, Universität Ulm, have been included in the present new edition of Wolf-Heidegger's atlas:

Volume 1: Figs. 37a, 39a, 60b, 101b,d, 103b, 129a, 144a, 145a, 146a, 147a, 148a,b, 156a, 157a, 158a, 159a, 166b, 167b, 204b,d,f, 208a, 211, 258a,b, 259a, 260a, 261a, 262a, 263a, 264a, 265a, 272a, 273a, 274a, 275a, 277a-c

Volume 2: Figs. 62a,b, 63a,b, 68c, 72b, 73b, 74b, 75b, 128b, 129b, 130b, 131b, 156b, 157b, 158c, 159c, 164, 165, 213b, 220, 222a, 223a, 224a, 225a, 252a,b, 254a,b, 258a-c, 260a,b, 355a,b, 356a,b, 357a,b, 358a,b, 359a,b, 360a,b, 361a,b, 362a,b, 386a,b, 400b,c, 408a,b

5. Organization

The first three editions of Wolf-Heidegger's *Atlas of Systematic Human Anatomy* were published in three volumes organized in a somewhat modified manner according to the classical division into three parts:

Volume 1: Bones, joints, muscles

Volume 2: Viscera, skin, sensory organs

Volume 3: Nervous system, vascular system

In the 4th edition, prepared by H. Frick, B. Kummer, and R. Putz, the main contents of the previous three volumes were concentrated into one volume and reorganized according to topographical aspects.

The present 5th edition is divided into two volumes; the topographical arrangement of the illustrations has been taken over from the 4th edition, but the chapters have been arranged as follows:

Volume 1: Systemic anatomy, body wall, upper and lower limbs

Volume 2: Head and neck, thorax, abdomen, pelvis, central nervous system, eye, and ear.

This arrangement is based on the organization of the dissection courses into two main parts in many institutes of anatomy:

Part 1 – dissection of the locomotor apparatus: Ventral and dorsal body wall, upper and lower limbs

Part 2 – dissection of the viscera: Thorax, abdomen, pelvis, neck, head, brain

This division of the atlas into two volumes should make it easier for students to carry the atlas around during the dissection course and should moreover facilitate future supplementations.

新版图谱及图例采撷说明

此人体解剖学图谱曾于 1954 年、1960 年和 1972 年由 Gerhard Wolf-Heidegger 教授编写出版, 1990 年由 H. Frick 教授、B. Kummer 教授和 R. Putz 教授编写出版。与前四版相比, 第 5 版在若干方面进行了较大的修订并且增加了一些新的内容。

一、保留的解剖绘图

在第 5 版中保留了一些前三版中由 Wolf-Heidegger 等绘制的经典图片。为了方便初学者学习, 我们将黑白绘图重新着色, 并将第 4 版中由 Frick、Kummer 和 Putz 绘制的多数图片进行了修订和保留。

二、新增的解剖图片

在新版中我们补充了 230 张图片, 其中多数为局部解剖图片。在此对这六位柏林的绘图者表示感谢。首先是 Gertrud Heymann-Monhof 夫人, 她对解剖学的深入研究及特有的审美观使人信服。Hendrik Jonas 先生绘制了大量的运动系统及头颅部的图片, 并很好地保持了前几版的风格。Hildegard Heinen 绘制了大量示意图, 格调简捷明快。另外, Ilona Tripke 夫人绘制了大量的小幅图片, 三幅由 Corinna Naujok 绘制的水彩图不幸丢失。Frank Geisler 先生绘制了部分图片并对四版中被保留下的一些图片进行了修订。

Gertrud Heymann-Monhof 女士

第 1 卷: 封面; 图 18、19、20、21、48b,c、54b、59、60c、75、77a,b、79a、82、83、87a、134a、170、171、244a、246a-c、253、254

第 2 卷: 封面; 图 79、95a、107a、113、115b、118a、160c、166、172、209a-c、211b、227、243a、250a,b、251a,b、256a-c、285a、336a、342、352、382a、395c

Hendrik Jonas 先生

第 1 卷: 图 90a,b、99a、103a、123b、125a-c、127a-c、131a-d、137b,c、138a,b、155a、163a、167c-e、175b、176c、177b、181e、189a-c、191a,b、193c、196a,b、200b-e、201b-e、209b、213b、220b、221a,b、225a,b、225a,b、226b、249b,c、250a,b、257a-c、280b

第 2 卷: 图 264a,b、265a、276b、277b、281a,b、290a,b、292a、321a,b、324b、325b、329a,b、332a,b、368a、369a,b、394a,b、395a、399a

Hildegard Heinen 女士

第 1 卷: 图 40b,c、41b,c、67a,b、69a,b、71c、73a

第 2 卷: 图 95b,c、106b、114c、122b、123b、137a-c、144a-c、145a-c、146a.c、147a,c、178b、212a、235b,c、237b、246b,c、247a,b、272a-e、273a,b、392a,b,d

Ilona Tripke 女士

第 1 卷: 图 5c、23b、24、63b、79、134b、244b、248b、249a

第 2 卷: 图 45b、49b、60a,b、80a、81a、84a,b、86b、87b、88b、89b、90b,c、183c、184a,b、199b、214b-e、231b、249、293a-c、371d、379a、382b、383b

Corinna Naujok 女士

第 1 卷: 图 252

第 2 卷: 图 320a,b

Frank Geisler 先生

第 1 卷: 图 6a-c、18、19、20、21

第 2 卷: 图 27b、53a,b、405a

其他解剖学图片, 如: 冠状动脉的三维重建图片(第 2 卷, 图 148a-d)由 Eckart Fleck 和 Helmut Oswald (德国柏林心脏病研究中心)友情提供。喉镜检查图片(第 2 卷, 图 69a-d), 由 Martin Jäckel 博士(格廷根医学专科学校)提供。Dieter Sasse 博士协助我们在巴塞尔大学解剖室对肺、肝、肾血管铸型标本由 Hansjörg Stöcklin 进行了拍

照。在此对提供帮助者一并表示感谢。

三、影像学图片

新版图谱中收录了一些常用的影像学图片。以往版本中的多数 X 线、CT 和 MRI 图片在第 5 版中更换为更新的图片。编者尽可能地把 CT 和 MRI 图片结合起来反映人体的正常结构，同时还选择性地附有一些超声波检查图片。这些工作的取得离不开提供热情帮助的放射学专家，他们是柏林的 Reimer Andresen 博士和策伦多夫医院 Dietrich Banzer 博士。他们不辞劳苦地收集正常的影像图片，这是一项比预料更加艰巨和耗时的工作。多数 MRI 图片是用策伦多夫医院的 Philips Gyroscan ACSNT 型磁共振机所拍摄。

近 200 张 X 线、CT 和 MRI 以及超声图片由 Rainer Andresen's 博士和 Dietrich Banzer 博士提供：

第 1 卷：图 3a,b、7b、8d、33b、36a,b、37b、38a,b、39b、43、45d、51a,b、55c、71a,b、73b、85b、87b、91a,b、93a,b、97a,b、100a,b、101a,c、103c、106b、120、121、123a、129b、137a、139、144b、145b、146b、147b、149a-c、151b、155b、156b、157b、158b、159b、163b、164b、166a、167a、173a,b、181f、185、188c、194a,b、195a-c、197a,b、202a-c、203a-c、204a,c,e、205、208b、209a、210a,b、247a,b、251、258c,d、259b、260b、261b、262b、263b、264b、265b、269、272b、273b、274b、275b、276a-c、281a,b

第 2 卷：图 5、7、12b、26c,d、41b、43c、53c,d、59a、61a,b、71a-c、72a、75a、78、110a、118b、119b、126、127、128a、129a、130a、131a、156a、157a、159a,b、175a-c、182a,b、186b,d、188b、189c,d、194b、197a,b、198b、201a,b、203b、208c、215a-e、217a,b、218c、219、221、223b、224b、229、244b、253a,b、255a,b、257a-c、259a-c、261a,b、271b、278a,b、287a-c、305、336b、339、341、343、347、349、367b、378b、385a,b、387a,b

特别感谢以下提供 X 线和超声图片的合作者：

Eckart Fleck 和 Helmut Oswald 教授(德国柏林心脏研究中心)

第 2 卷：图 136a-c、138a-h、146b,d、147b,d

Martin Jckel 博士(格廷根大学 HNO 门诊部)

第 2 卷：图 9、11、395b、406a-c、407a-c

Herbert Kellner 博士(慕尼黑大学后期临床教学中心医学门诊部)

第 1 卷：图 173c

Thomas Riebel 博士(柏林洪堡大学医学部)

第 1 卷：图 177a

Christof Sohn 博士(海德堡大学妇科)

第 2 卷：图 74a、238b、242a-d、245b,c

Diethmar Zeidler 博士(柏林，齿科专家)

第 2 卷：图 40e,f

Wolfram Zoller 博士(慕尼黑大学后期临床教学中心医学门诊部)

第 2 卷：185a、186c、199c、210e、218b、236b,c

感谢 Gottfried Bogusch 教授(现柏林洪堡大学，前柏林大学解剖中心)提供了他多年收集的大量珍贵的 X 线和断层图片

第 1 卷：图 194a、199a,b、214b、222b

第 2 卷：图 23c、59b、73a、74a、107a、158a,b、160a,b、161a,b、176b、213a、222b、225b、278c,d、301b、302a,b

四、解剖学断层

为了便于理解，图谱中特意把 CT、MRI 图片和解剖断面放在一起便于比较。尽管多数解剖室都很注重断层解剖学，但仅少数研究室有完整的人体断层，在此感谢提供断层标本的 Martin Herrmann 教授和 Ernst Voigt

先生(乌尔姆大学解剖系)。Voigt 先生对标本进行了整理并拍照。

新版沃氏图谱中的 90 张解剖学断面图片，其具体排序如下：

第 1 卷：图 37a、39a、60b、101b,d、103b、129a、144a、145a、146a、147a、148a,b、156a、157a、158a、159a、166b、167b、204b,d,f、208a、211、258a,b、259a、260a、261a、262a、263a、264a、265a、272a、273a、274a、275a、277a-c

第 2 卷：图 62a,b、63a,b、68c、72b、73b、74b、75b、128b、129b、130b、131b、156b、157b、158c、159c、164、165、213b、220、222a、223a、224a、225a、252a,b、254a,b、258a-c、260a,b、355a,b、356a,b、357a,b、358a,b、359a,b、360a,b、361a,b、362a,b、386a,b、400b,c、408a,b

五、编排组织

前三版沃氏系统解剖学图谱按经典的分法由 3 卷组成：

第 1 卷：骨，关节，肌肉

第 2 卷：内脏，皮肤，感觉器官

第 3 卷：神经系统，脉管系统

由 H. Frick、B. Kummer 和 R. Putz 编写的第 4 版把前三版 3 卷中的内容集中到 1 卷并按局部解剖学章节编排组织。

第 5 版由两卷组成，局部解剖学图片仍按四版组成，但章节组织如下：

第 1 卷：系统解剖学，体壁，上、下肢

第 2 卷：头颈，胸，腹，盆，中枢神经系统，眼，耳

这样安排是出于以下方面的考虑，许多解剖室把解剖操作内容分为以下的两下部分：

第 1 部分 运动系统解剖：腹侧和背侧体壁、上、下肢

第 2 部分 内脏解剖：胸部，腹部，盆部，头，颈，脑

图谱分为两卷，学生在使用时仅需按其解剖内容带 1 卷图谱，方便携带，同时有利于以后补充增加新的内容。

Information for Users

1. Anatomical Nomenclature

In the present atlas, the designation of anatomical structures follows the most current international anatomical nomenclature, the *Terminologia Anatomica* (TA), in its latest edition of 1998. In this edition of the TA, a list of English terms in common usage was taken up for the first time. The American English variants of these terms (e.g., cecum instead of caecum, esophagus instead of oesophagus, fiber instead of fibre, gray instead of grey, tenia instead of taenia) were used throughout in the present atlas. Many of the synonyms that appear in the TA are listed in the subject index, an arrow referring to the main term given by the TA.

2. Abbreviations

In some cases, the following abbreviations were used:

Singular		Plural	
a.	= artery	aa.	= arteries
br.	= branch	brr.	= branches
cut.	= cutaneous		
eth.	= ethmoidal		
fem.	= femoral		
inf.	= inferior		
lig.	= ligament	ligg.	= ligaments
m.	= muscle	mm.	= muscles
n.	= nerve	nn.	= nerves
post.	= posterior		
r.	= ramus	rr.	= rami
rad.	= radiation		
rt.	= right		
sup.	= superior		
v.	= vene	vv.	= venes

3. Brackets

Parentheses () are used to note terms also shown in parentheses in the TA, and for designating varieties, additional information, and explanations. Moreover, in the legends, the relative size of images referred to the originals is given as percentage in parentheses.

Commonly used, but not official TA terms are noted in pointed parentheses ().

Numbers of vertebrae and cranial nerves are placed in square brackets [], as in the TA.

4. Dashes

A dash following (left column) or preceding (right column) an entry indicates that one or several specific entries for the same body part will follow. The generic term is shown above it – usually without a pointer:

Examples	Body of fibula	or	Infraclavicular part
	Lateral surface –		of brachial plexus
	Anterior border –		– Lateral cord
	Medial surface –		– Medial cord
	Interosseous border –		– Posterior cord

5. Pointers and Dots

If dots on a pointer identify two or more anatomical structures or if several dots appear on a pointer, the various designations are separated by a comma; their order follows that of the arrangement of the anatomical structures in the figure. In both columns, the labelings are arranged according to the following principle: left first, then right; in the case of branched pointers, above first, then below.

6. Notation of Sizes

Unless otherwise indicated in the legends, the anatomical drawings in the present atlas always represent the situation in adults; the percentages given in parentheses in the legends denote the relative size of the image referred to the original. With a view to the considerable biological variations in body size, the percentages have been rounded off and should only be considered as indicative.

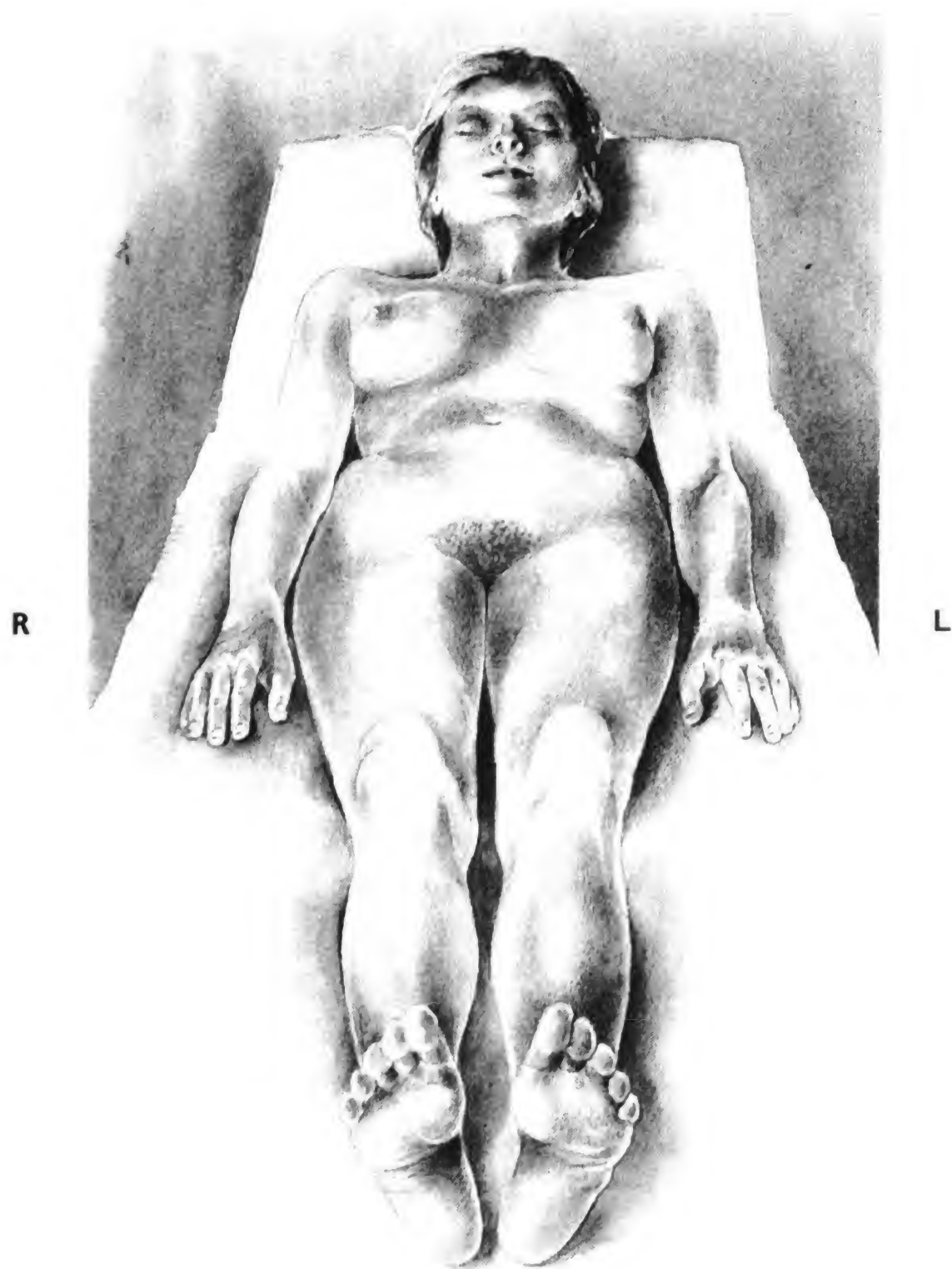
7. MRI Tomograms

Enhancement of the tissue-specific relaxation parameters T_1 and T_2 in MRI tomograms is noted in the legends as T_1 or T_2 weighting. T_1 - and T_2 -weighted tomograms represent the various structures of the human body in different brightnesses and different contrasts. Thus, in T_1 -weighted tomograms, liquid-filled spaces are shown black, muscles dark, and the bone marrow white. In T_2 -weighted tomograms, liquid-filled spaces appear white, bones dark, and muscles light gray.

8. Tomograms and Anatomical Sections

In current clinical practice, transverse computed and magnetic resonance imaging tomograms of the human body are always viewed from caudal, that is from below and looking up. This is the reason why, in the present atlas, the anatomical sections – with the

few exceptions noted in the legends – are also viewed from caudal, that is from the feet of the patient. While this view of the tomograms and sections is doubtless difficult for beginners, it does correspond to the physician's perspective when he approaches the supine patient from the foot end of the patient's bed. The accompanying figure illustrates this view from caudal (bottom) to cranial (top) and makes clear that in this perspective the organs located on the patient's right (R) side appear on the left in the figure and the organs located on the left (L) side appear on the right side of the figure.



(Painted by G. Heymann-Monhof, Berlin)

使用指南

1.解剖学名词

新版图谱中解剖学名词以1998年的最新版的国际解剖学术语(the Terminologia Anatomica,TA)为标准。同时第一次采用许多通用的英文术语,其中包括美语中一些名词的变体拼法(如盲肠cecum代替caecum、食管esophagus代替oesophagus、纤维fiber代替fibre、灰色gray代替grey、带tenia替代taenia)。许多出现在国际解剖学术语中的同义词列在名词检索目录上,带箭头的为TA给出的主要术语。

2.缩略词表

以下缩略词出现在部分章节中:

Singular (单数)		Plural (复数)
a.	= artery (动脉)	aa. = arteries
br.	= branch (分支)	brr. = branches
cut.	= cutaneous (皮肤的)	
eth.	= ethmoidal (筛骨的)	
fem.	= femoral (股骨的)	
inf.	= inferior (下的)	
lig.	= ligament (韧带)	ligg. = ligaments
m.	= muscle (肌肉)	mm. = muscles
n.	= nerve (神经)	nn. = nerves
post.	= posterior (后面的)	
r.	= ramus (支)	rr. = rami
rad.	= radiation (放射)	
rt.	= right (右侧的)	
sup.	= superior (上的)	
v.	= vene (静脉)	vv. = venes

3.括号

圆括号 () 内的术语表示其在TA中也是位于括号内的,其他情况用来表示附加的信息和解释。另外,图释中 () 内的百分比表示图片与实物的相对比例。

尖括号 < > 内表示经常用到但不是正式TA术语的一些名词。

方括号 [] 内数字表示椎骨、脑神经的数目。

4.短横线

词条后面(左侧列)或前面(右侧列)的短线代表着某个相同的躯体部位,它与短线前或后的一个或数个特殊词条限制

Examples (举例)	Body of fibula (腓骨体) or	Infraclavicular part
	Lateral surface —(外侧面)	of brachial plexus(臂丛锁骨下部)
	Anterior border —(前缘)	— Lateral cord (外侧束)
	Medial surface —(内侧面)	— Medial cord (内侧束)
	Interosseous border —(骨间嵴)	— Posterior cord (后束)

或被限制,形成新的名词。这一相同部位的术语位于它们的上方,通常不特别标明。

5.标注和圆点

如果在一个标注中出现一个或多个圆点(用来隔开相同的一个或几个解剖结构),多种图解间使用逗号隔开。它们的顺序以图片中解剖结构的排列为依据。在两列标注中,标注的名词遵照以下原则:先左后右;在分支标注中先上后下。

6.比例大小的表示

除非在图释中注明,图谱中的图片都来自成人。图解中圆括号内的数字表示图片与原器官比较的相对大小。尽管比例的计算相当精确,但考虑到存在较多变异,图释中的比例仅供参考。

7.MRI 成像

MRI 中组织特异性释放参数T1 和T2 加强在图释中以T1 加权,T2 加权表示。T1 和T2 加权代表在不同亮度和对比度下人体的不同结构。于是,在T1 加权成像中,液体区呈黑色,肌肉暗灰色,骨髓为白色。而在T2 加权成像中,液体区呈白色,骨为灰色,肌肉为亮灰色。

8.影像和解剖断层

在目前的临床工作中,CT 和MRI 图片都是从尾侧向颅侧观察的,即从下往上看。这也就是图谱中多数解剖断面也是从下往上观察即从病人的脚向头部观察的原因,个别图片例外。这无疑给初学者增加了困难,但它却适合临床医生检查病人的习惯。右边的附图即表示出临床医生经常面对病人的观察角度,即从尾侧向颅侧观察。附图同时清楚地标明病人器官的左右。

译者的话

为适应当今高等医药院校双语教学的发展需要,帮助医药院校师生进一步提高英文阅读水平,我们选择并翻译了此书,希望能为广大医药院校,学生提供一本近乎原版的解剖学双语教材。

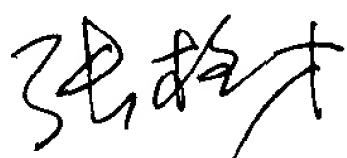
本书是当今世界上最权威的人体解剖学图谱之一,先后被翻译成英语、意大利语、西班牙语等多个语种的版本,并广泛被许多西方国家医学院校师生学习使用,书中所有解剖学名词及术语均以1998年新版的国际解剖学名词(the Terminologia Anatomica, TA)为标准。其图片质量之高为国内所有人体解剖学彩色图谱所不及,非常地道的英语表达完美无缺,为了向读者展示此书的英文版原貌,我们把中文加在英文原版的字里行间,个别位置稍有偏离请读者见谅。做了很多的翻译版图书,我们也尝试着一种新的出版方式,使读者有语言选择性地阅读,同时能更准确地领悟英文所表达的中文内涵。

本书的出版需特别感谢两位解剖学家——一位是前西安医科大学前校长、解剖学教授、博士生导师任惠民老师;另一位是中南大学湘雅医学院基础医学院院长、解剖学教授、博士生导师曾志成老师。他们在百忙之中对本书的翻译文字及本书所有图片进行了认真的审阅。

由于译者水平有限,不妥之处在所难免,请读者在使用过程中多提宝贵意见,以便及时更正。

谨以此书献给——

正在学习医学的人们



2002.9.18

Wolf-Heidegger's

Atlas of Human Anatomy

Volume 1

Systemic Anatomy, Body Wall, Upper and Lower Limbs

5th, completely revised
and supplemented edition, 2000

586 figures of which 452 are in color

沃氏人体解剖学图谱

第1卷

系统解剖学，体壁，
上肢和下肢

2000 年第 5 次完全修订版

586 幅图，其中彩图 452 幅

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278-281	Blood vessels and nerves of the foot
	足血管和神经

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CNS, Eye, Ear

头和颈, 胸, 腹, 盆腔,

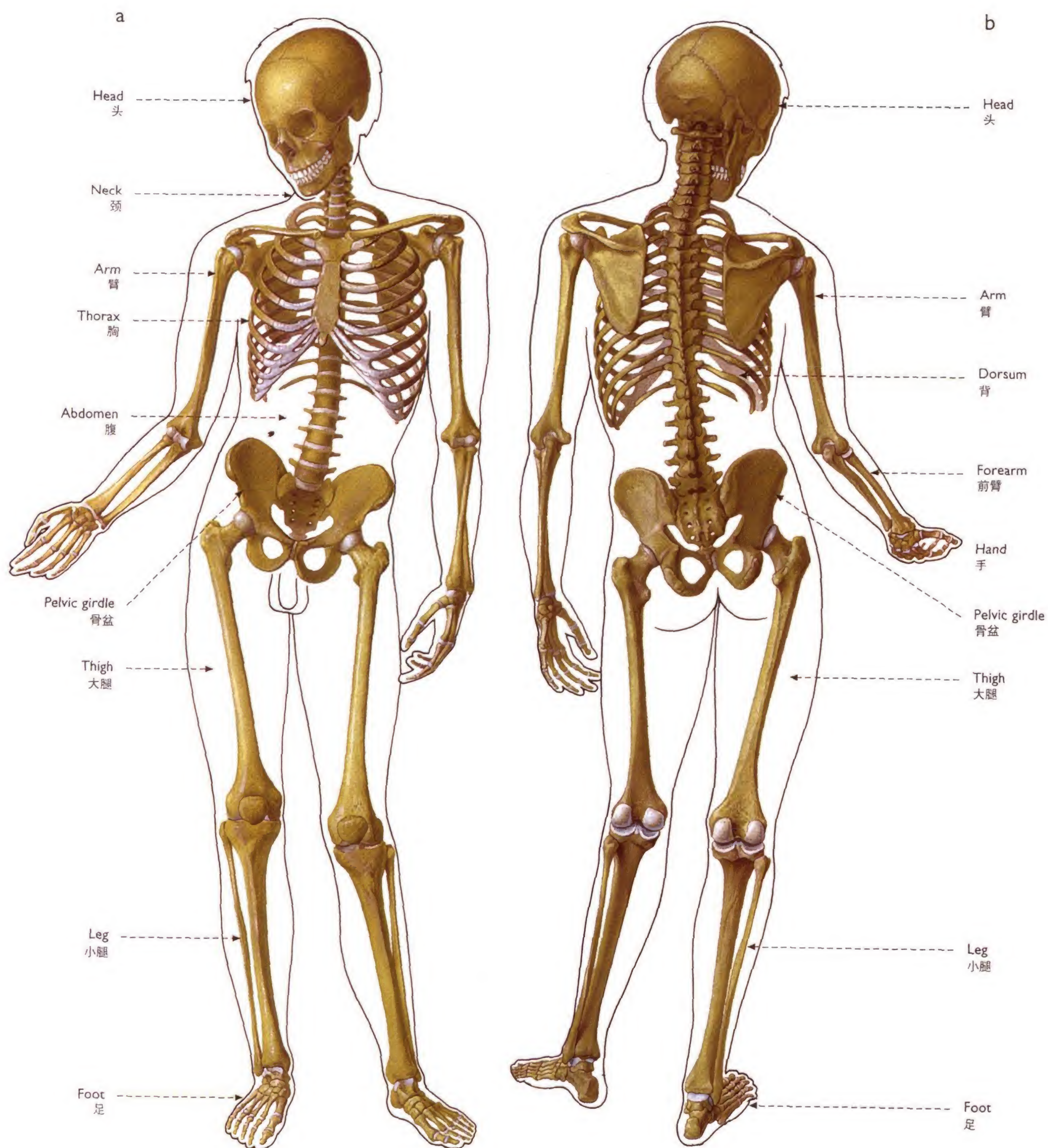
中枢神经系统, 眼, 耳

Subject Index

主题词索引

Systemic Anatomy

系统解剖学



2 Skeleton of the human body (10%) 人体骨骼(10%)

Male skeleton, scan 男性骨骼

a Ventral aspect 前面观

b Dorsal aspect 后面观

a



b

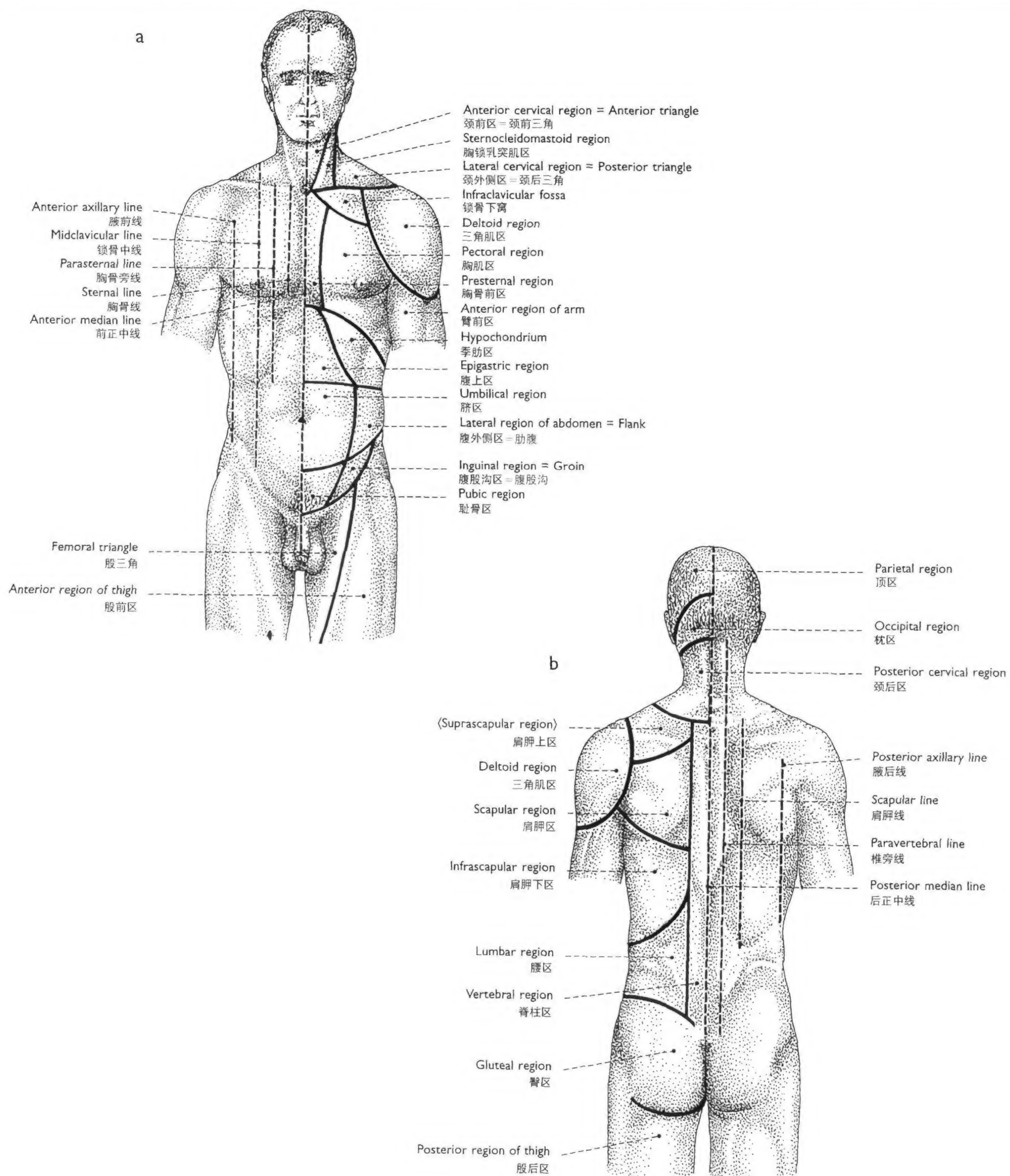


3 Skeleton of the human body (10%) 人体骨骼

Male skeleton, scan of bones using ^{99m}Tc 男性骨骼、 ^{99m}Tc 扫描

a Ventral aspect 前面观

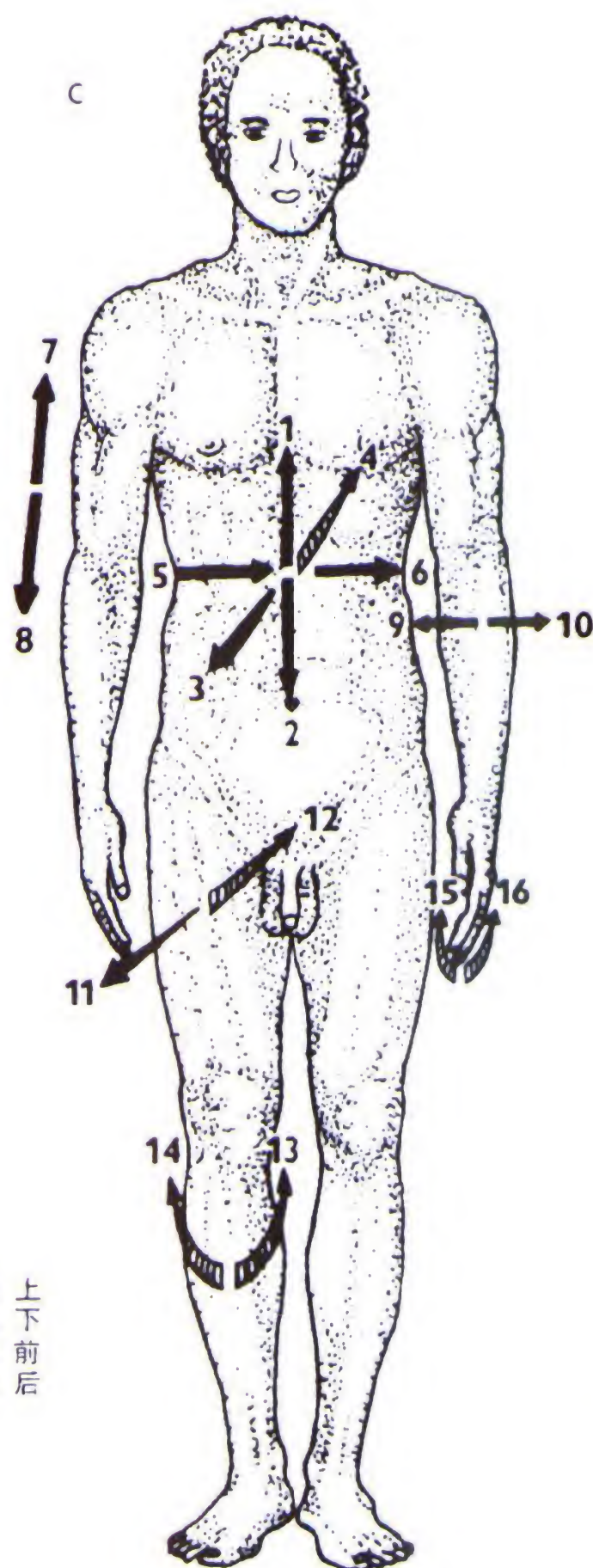
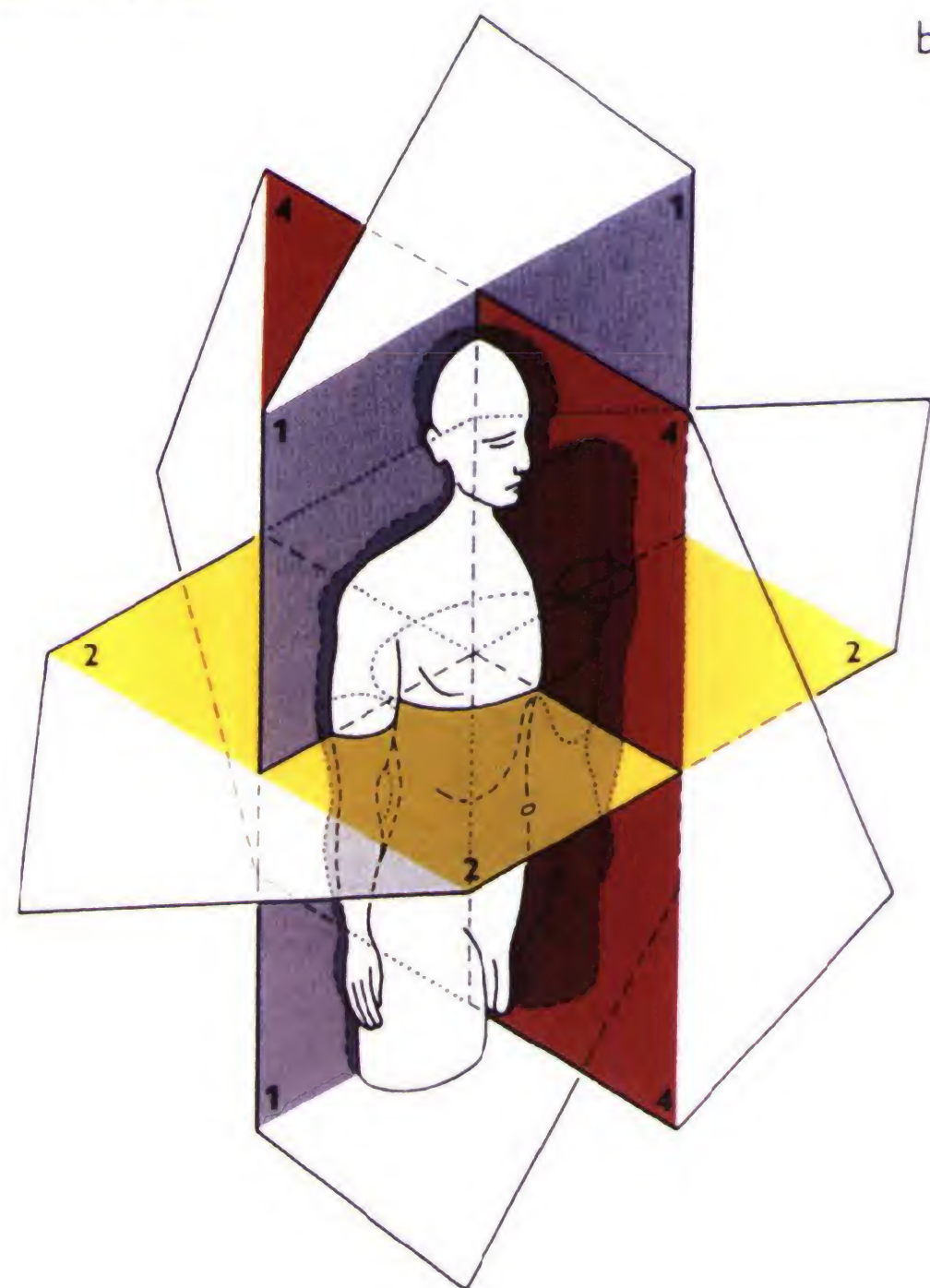
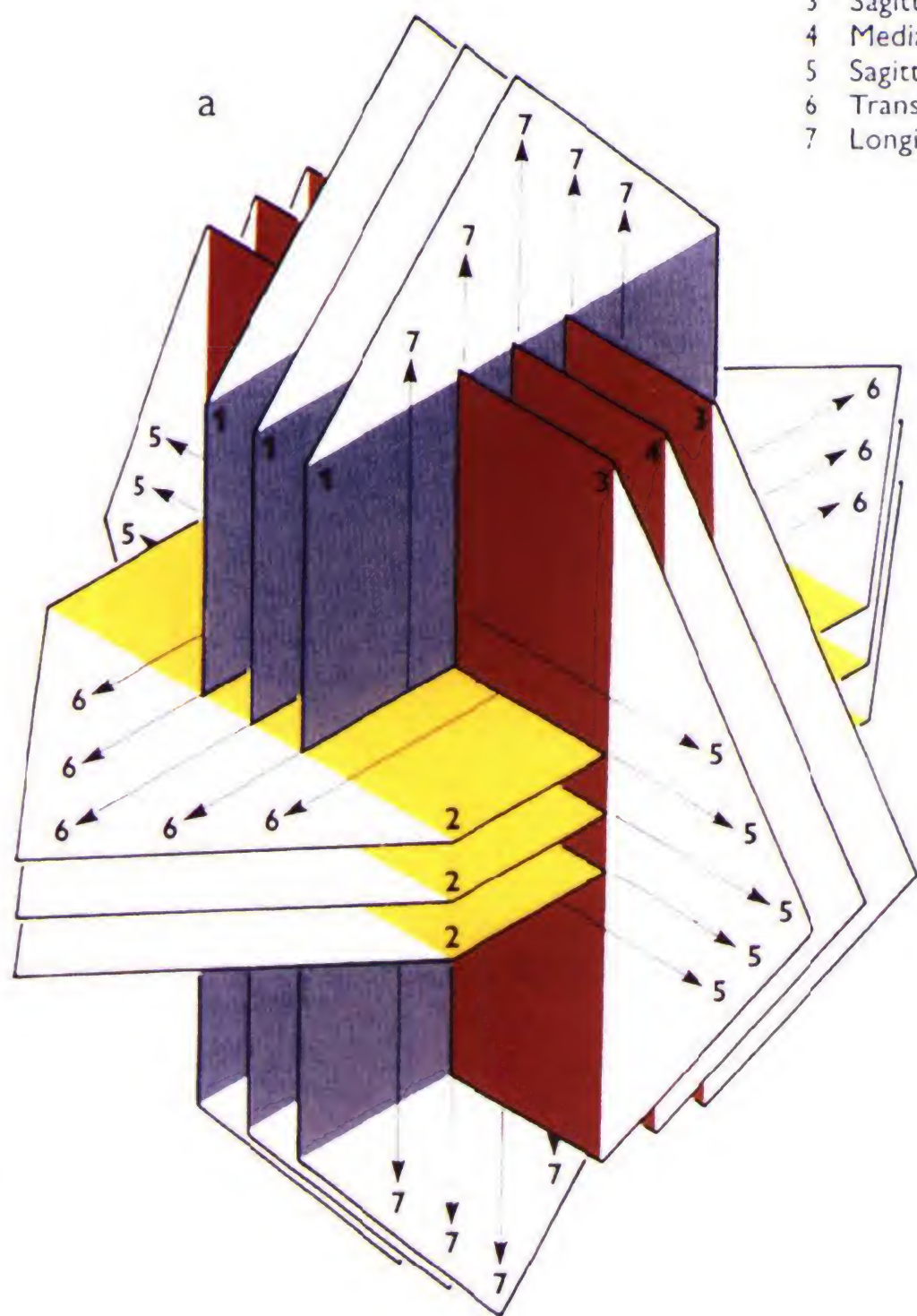
b Dorsal aspect 后面观



4 Regions and lines of the human body 人体分区和标志线

- a Ventral aspect 前面观
 b Dorsal aspect 后面观

- 1 Coronal (= frontal) planes 冠状(额状)面
- 2 Horizontal (= transverse) planes 水平(横切)面
- 3 Sagittal, paramedian planes 矢状面、旁正中面
- 4 Median plane (= plane of right and left symmetry) 正中面(=左右对称面)
- 5 Sagittal axes 矢状轴
- 6 Transverse axes 横轴
- 7 Longitudinal (= vertical) axes 纵(=垂直)轴

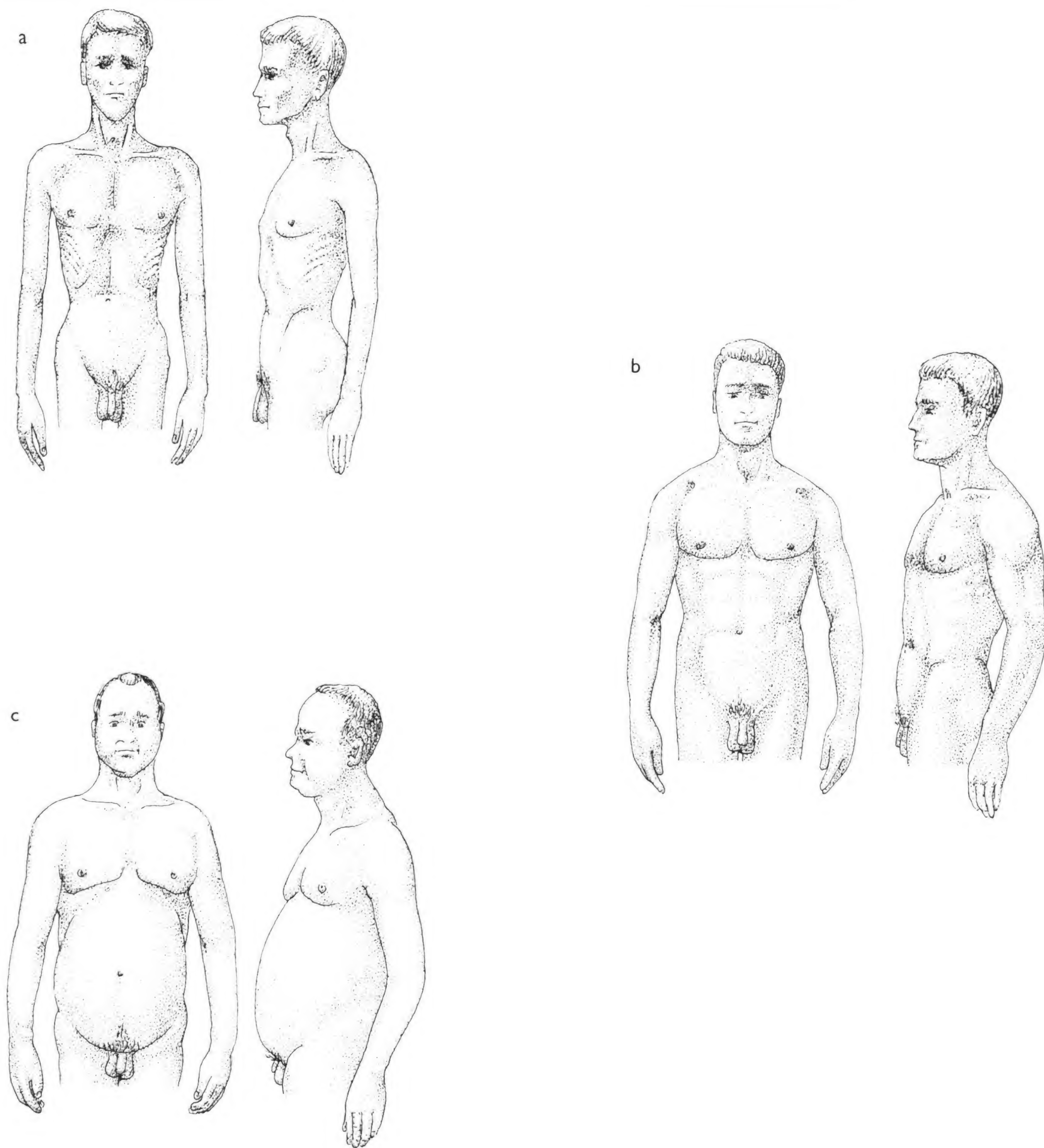


- 1 Cranial, superior 颅侧、上
- 2 Caudal, inferior 尾侧、下
- 3 Ventral, anterior 腹侧、前
- 4 Dorsal, posterior 背侧、后
- 5 Medial 内侧
- 6 Lateral 外侧
- 7 Proximal 近侧
- 8 Distal 远侧

- 9 Adduction 收
- 10 Abduction 展
- 11 Flexion 屈
- 12 Extension 伸
- 13 Medial rotation 内旋
- 14 Lateral rotation 外旋
- 15 Pronation 旋前
- 16 Supination 旋后

5 Planes and axes 面和轴

- a Planes and axes 面和轴
- b Planes 面
- c Spatial orientations and directions of motion 立体构象和运动方向



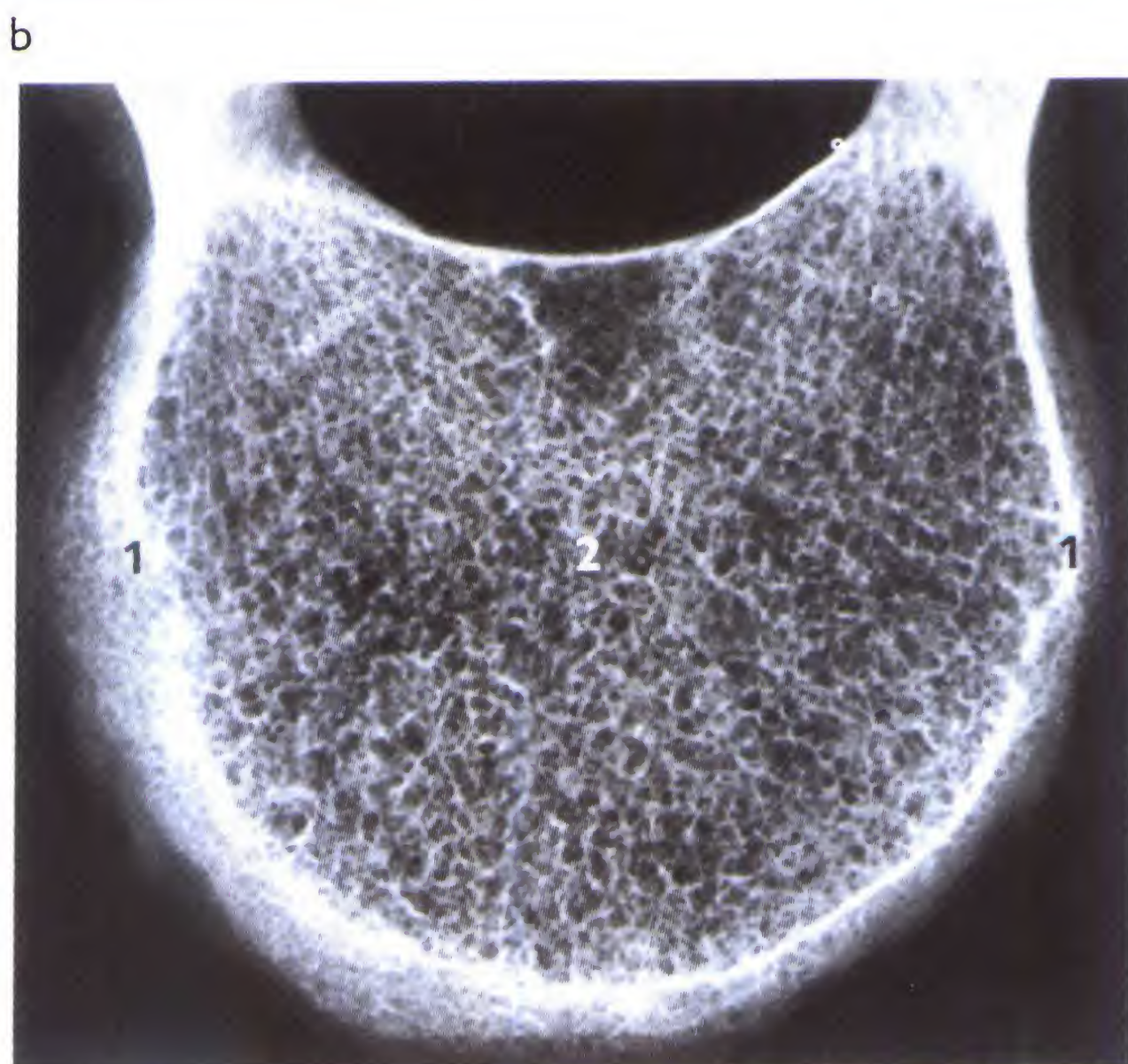
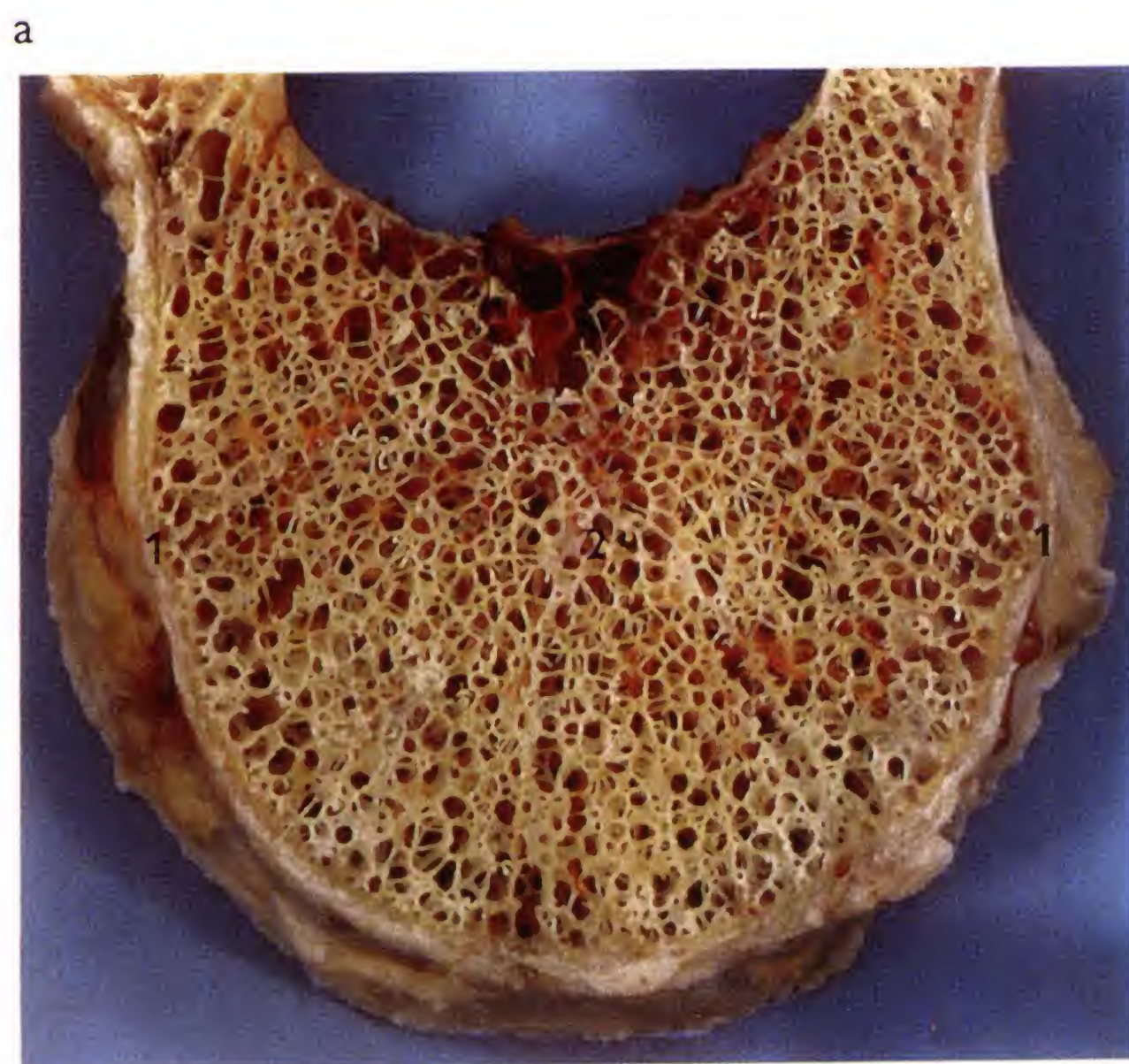
6 Body types 体型

Ventral and lateral aspects 前面和侧面观

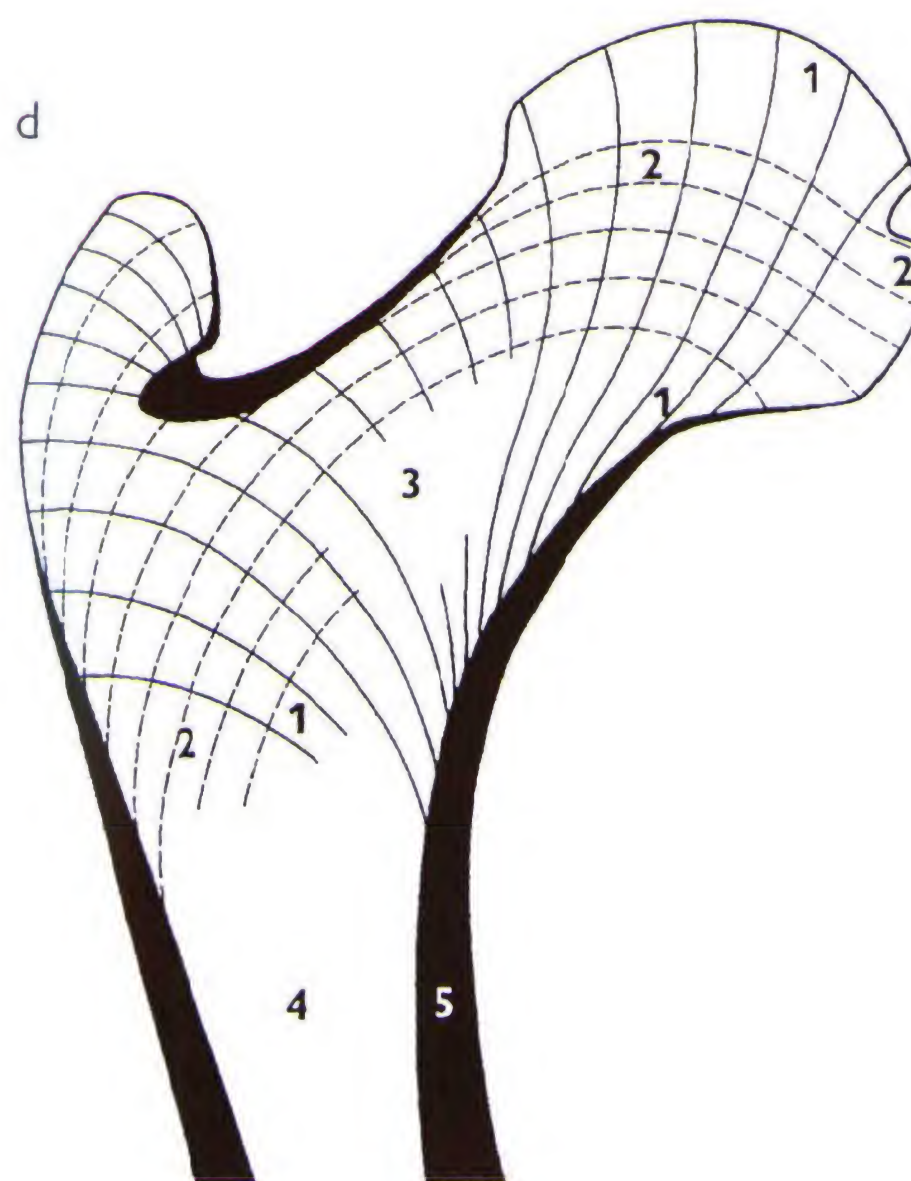
a Leptosomatic person 瘦长型人

b Athletic person 健壮型人

c Euryssomatic, pyknic person 阔体型、粗短型人



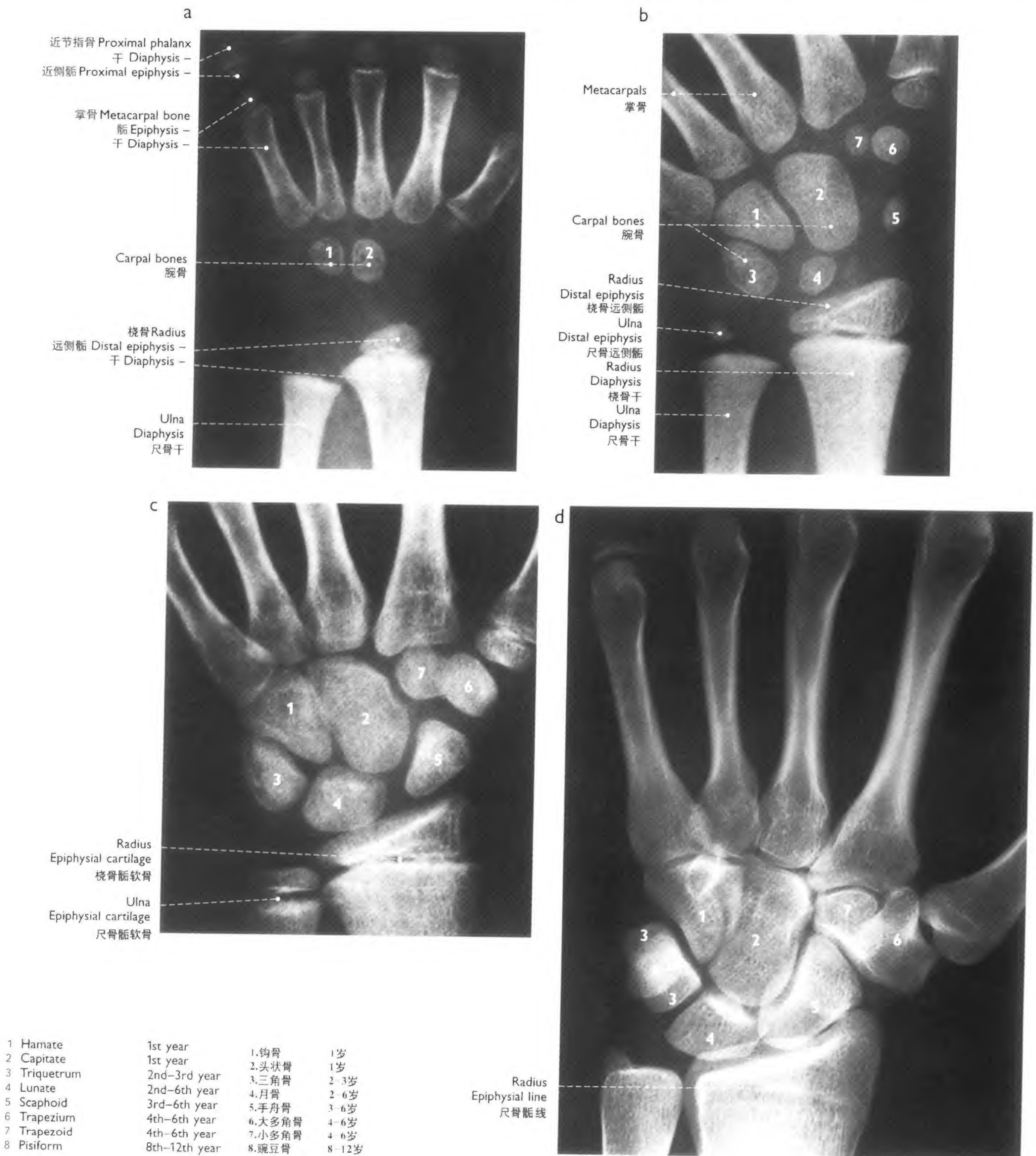
- 1 Compact bone 骨密质
2 Spongy bone 骨松质



- 1 Compressive stress trajectories (solid lines) 压力线(实线)
2 Tensile stress trajectories (dashed lines) 张力线(虚线)
3 WARD's triangle WARD's三角
4 Medullary cavity 髓腔
5 Compact bone of shaft 干骨密质

7 Compact and spongy bone 骨密质和骨松质

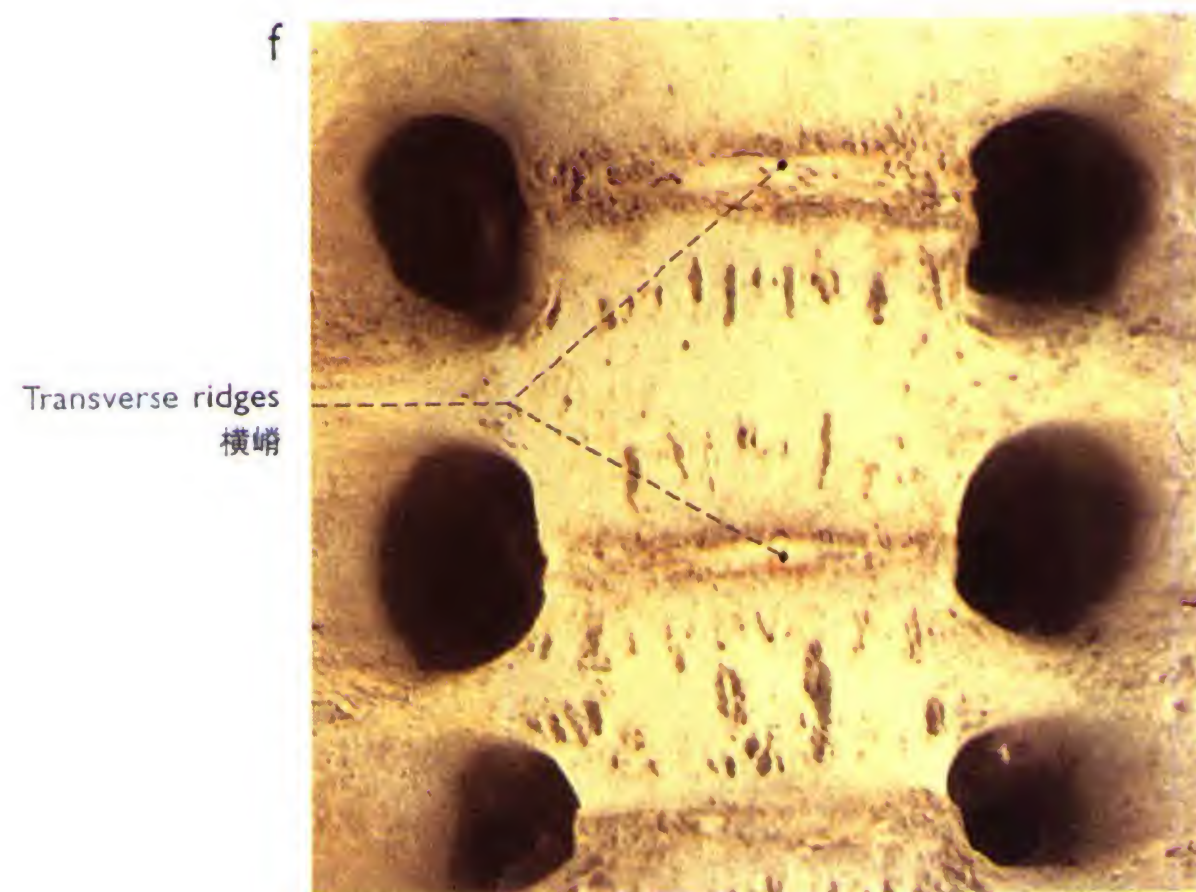
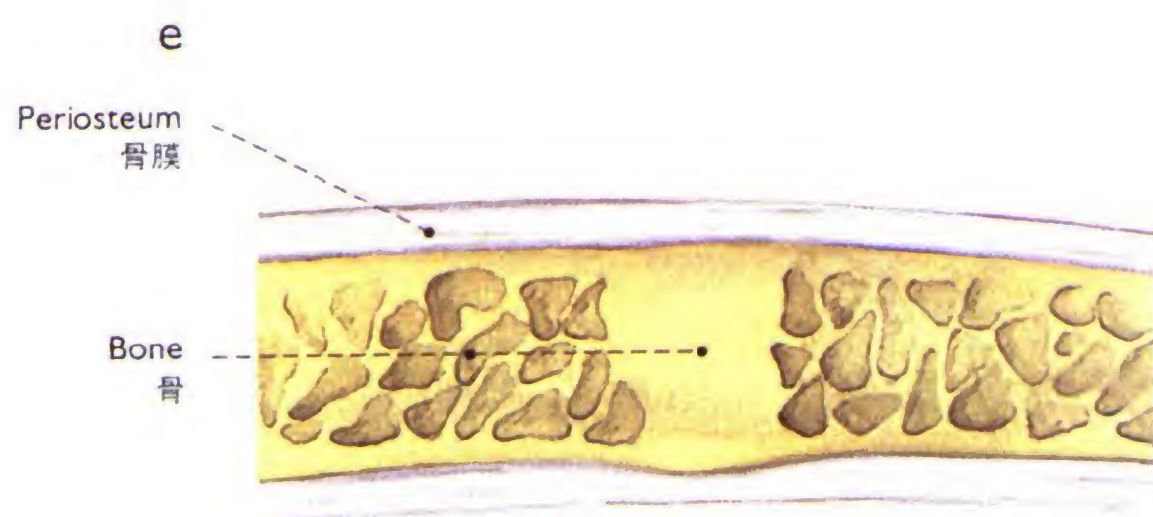
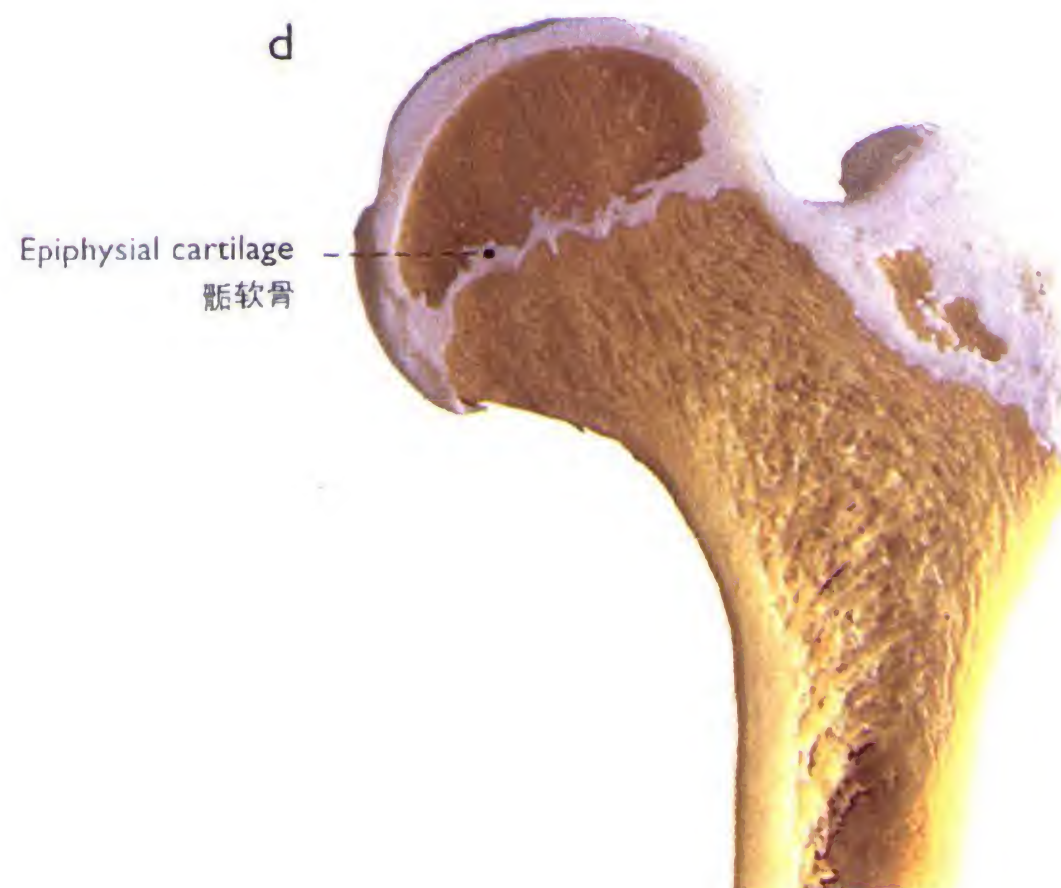
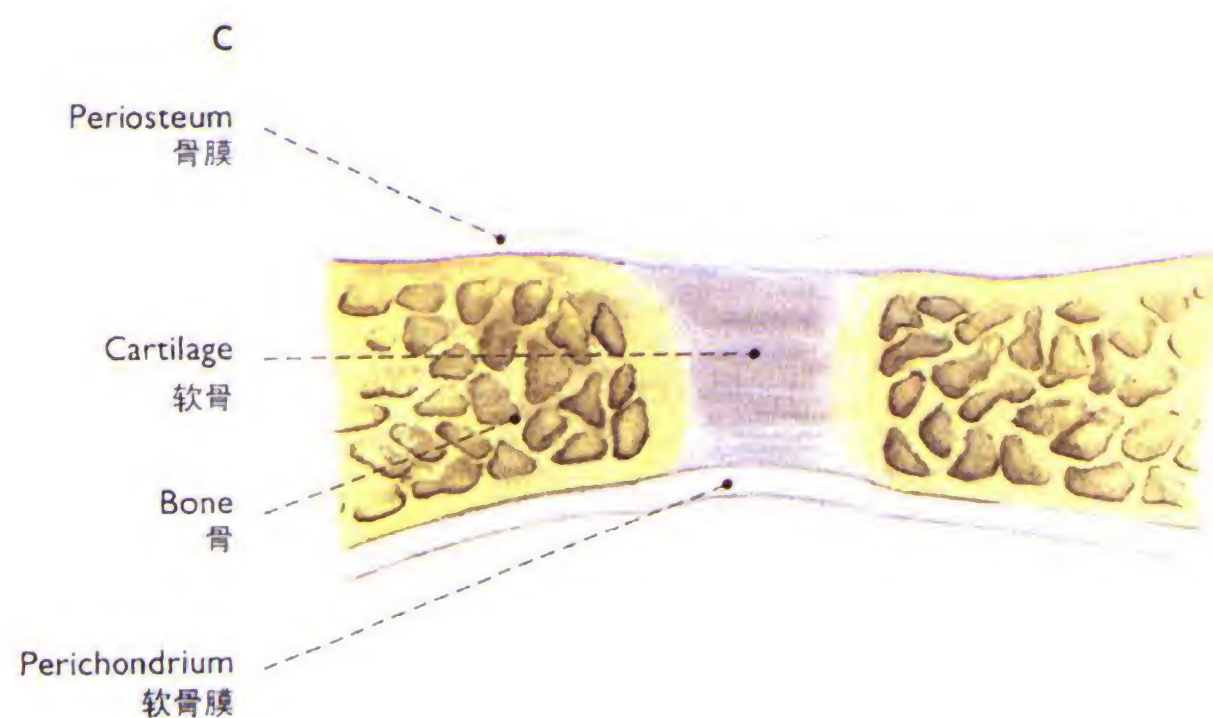
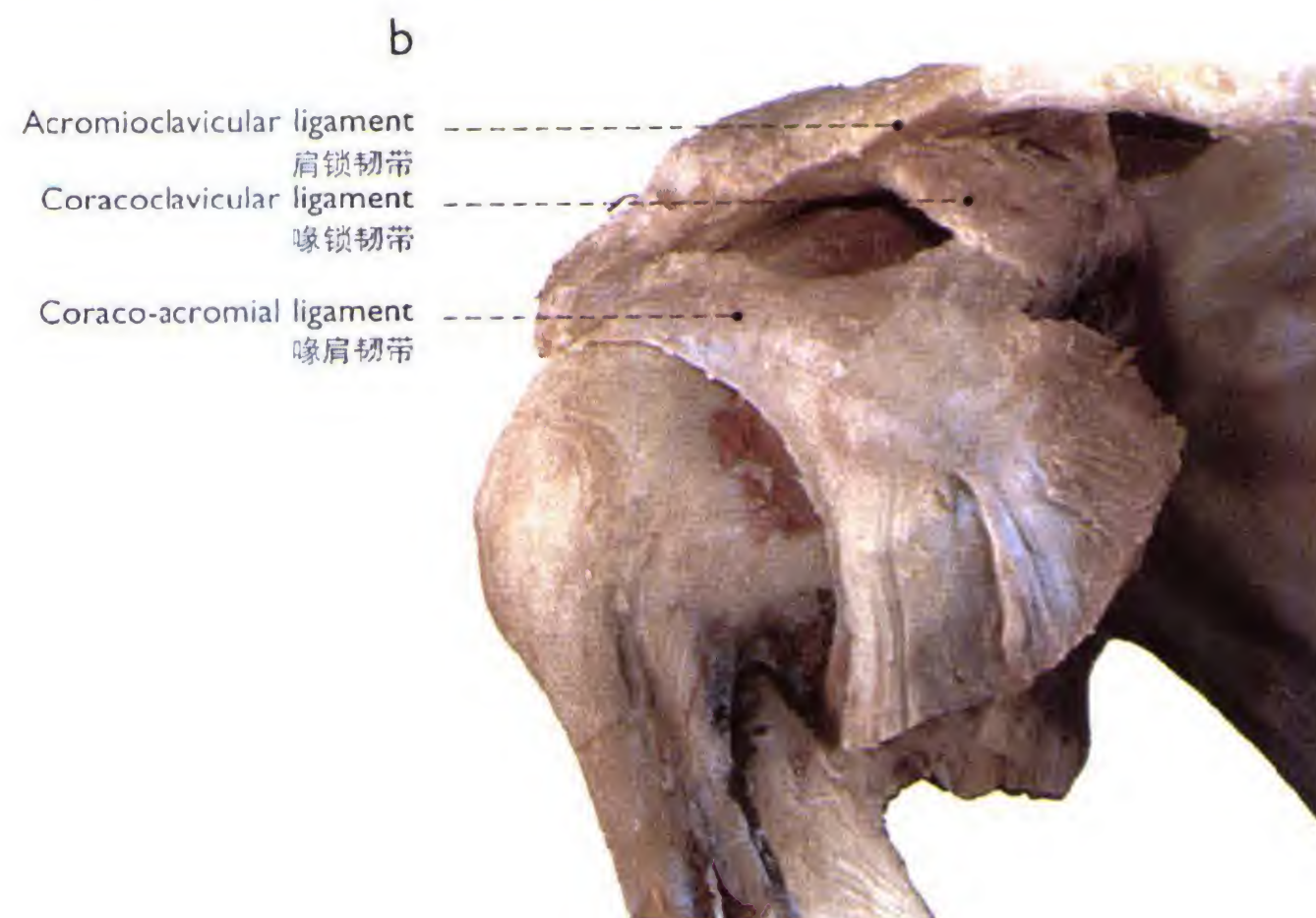
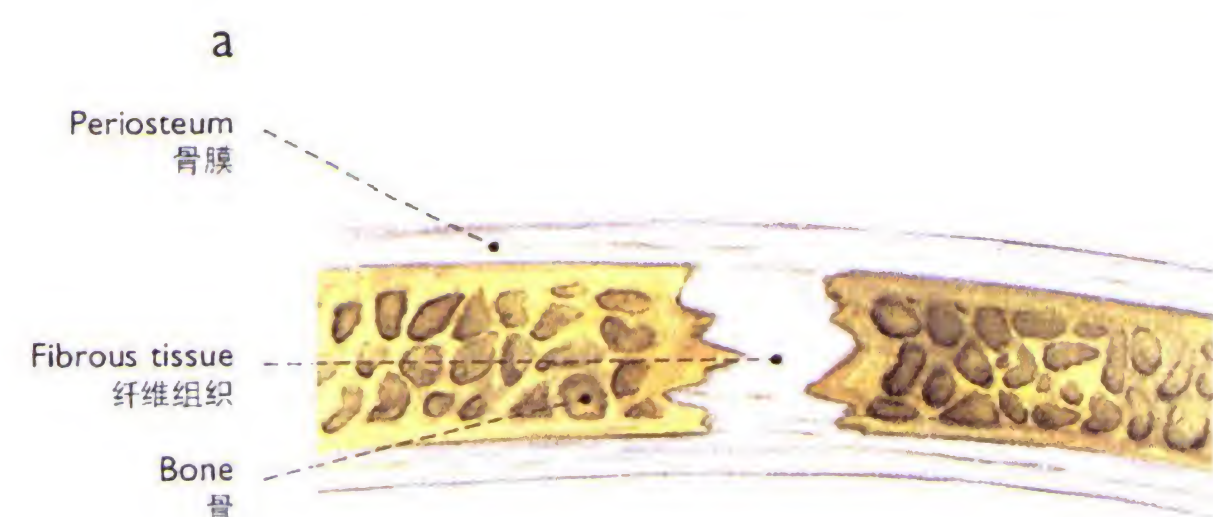
- a, b Vertebral body (200%) (R. Andresen, Berlin) 椎骨体(200%)
a Anatomical cross-section 解剖横切面
b Corresponding radiograph 相应X线照片
c, d Trabecular architecture, proximal end of the femur (80%) 小梁构型, 股骨上端(80%)
c Coronal section 冠状面
d Stress trajectories 受力线



8 Development of bones 骨的发育

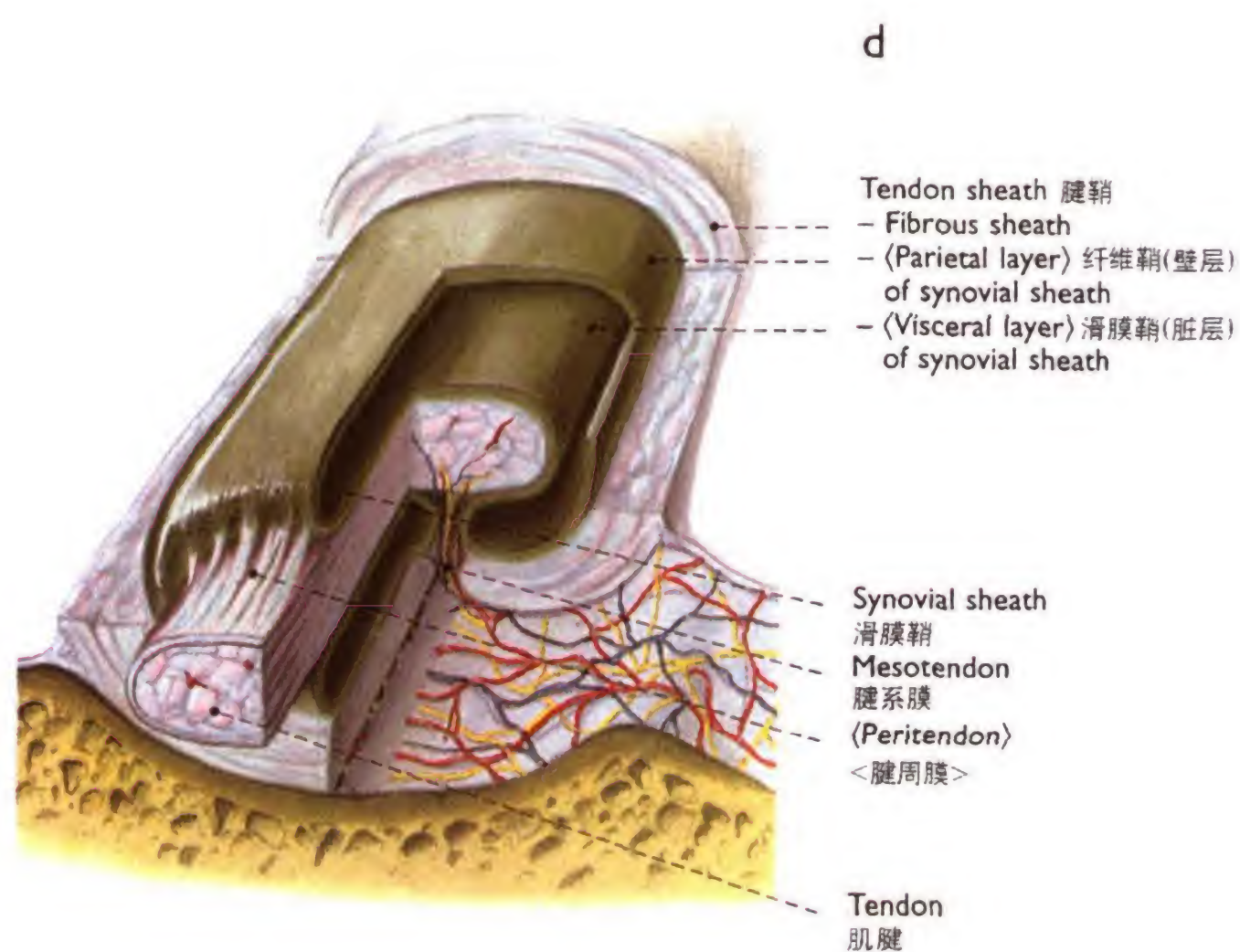
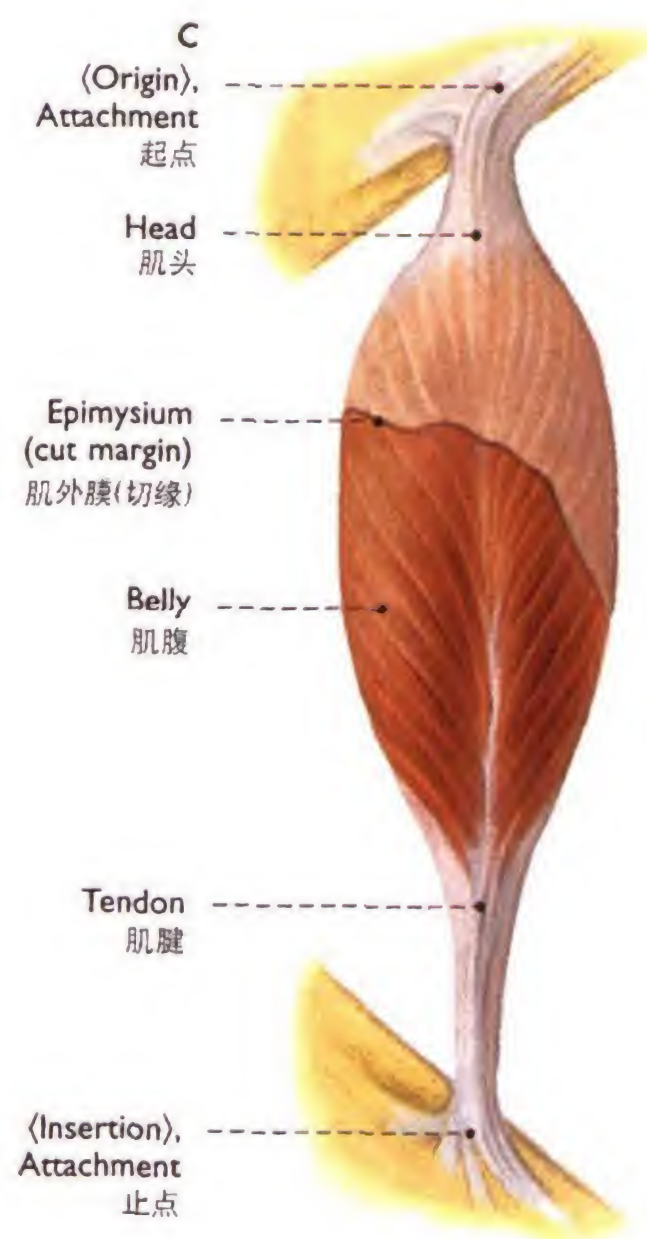
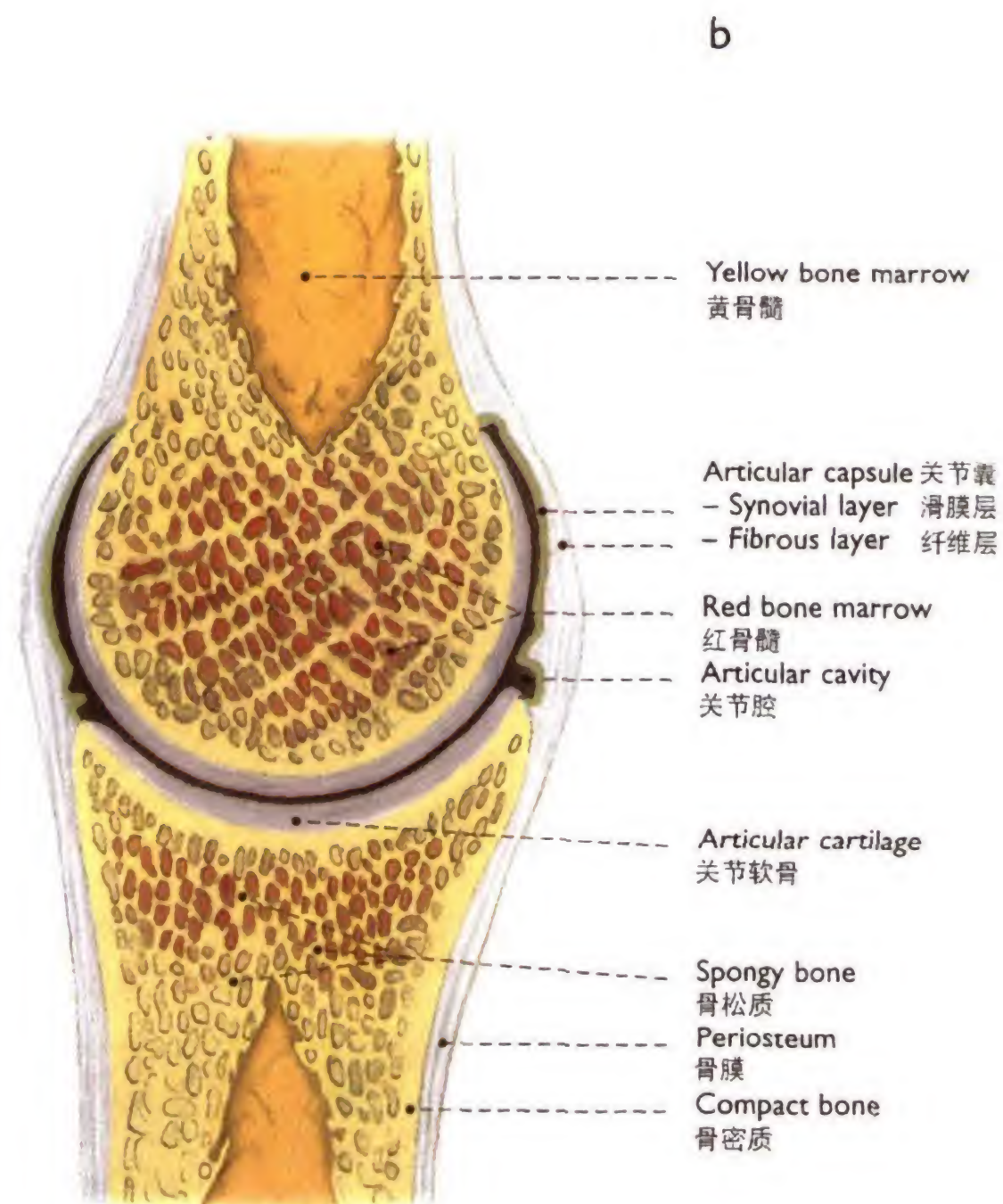
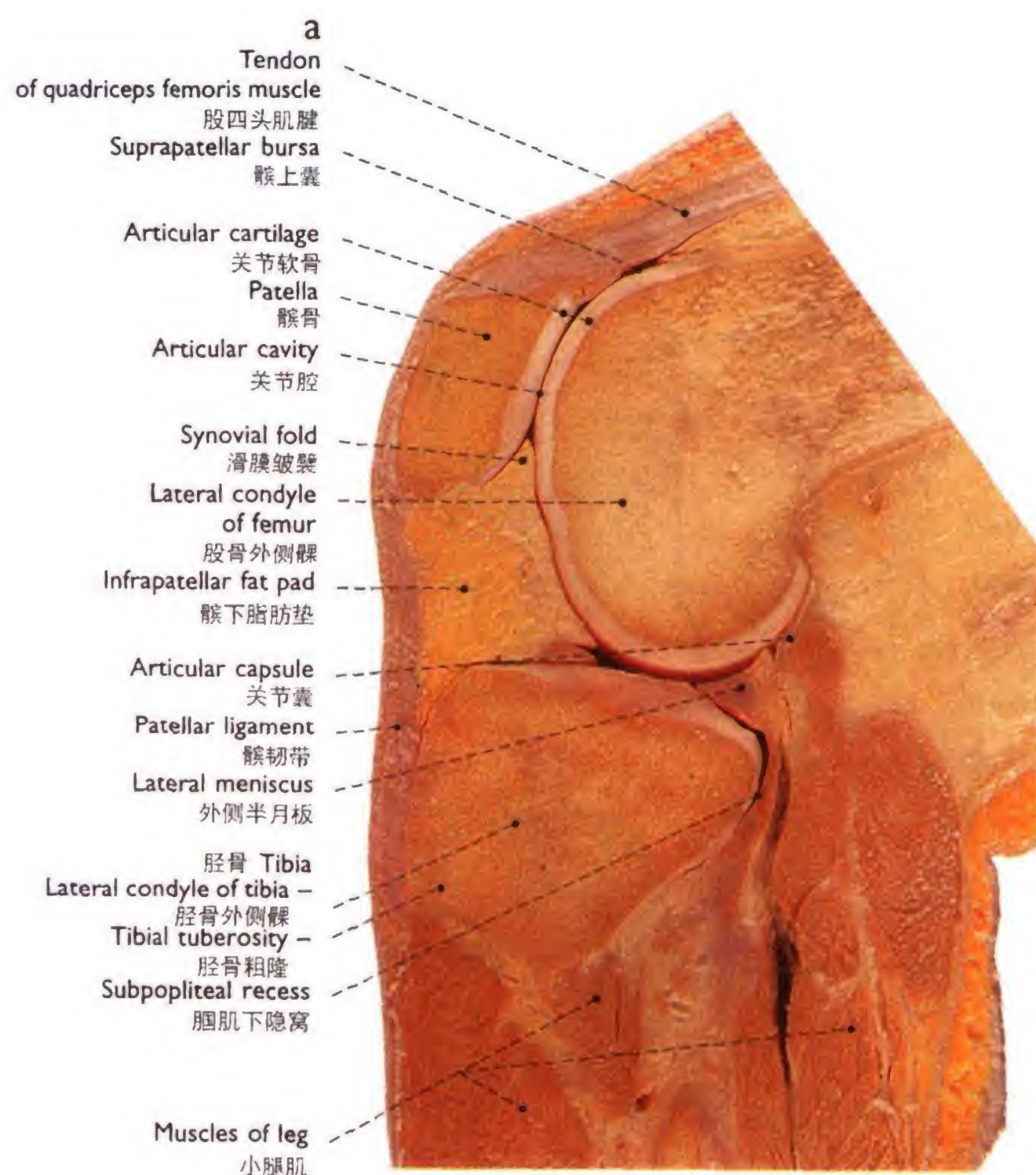
Dorsopalmar radiographs of the hand (100%) 手的后前位X线片

- a 1st year of life 1岁
b 2nd year of life 2岁
c 12th year of life 12岁
d 26th year of life 26岁



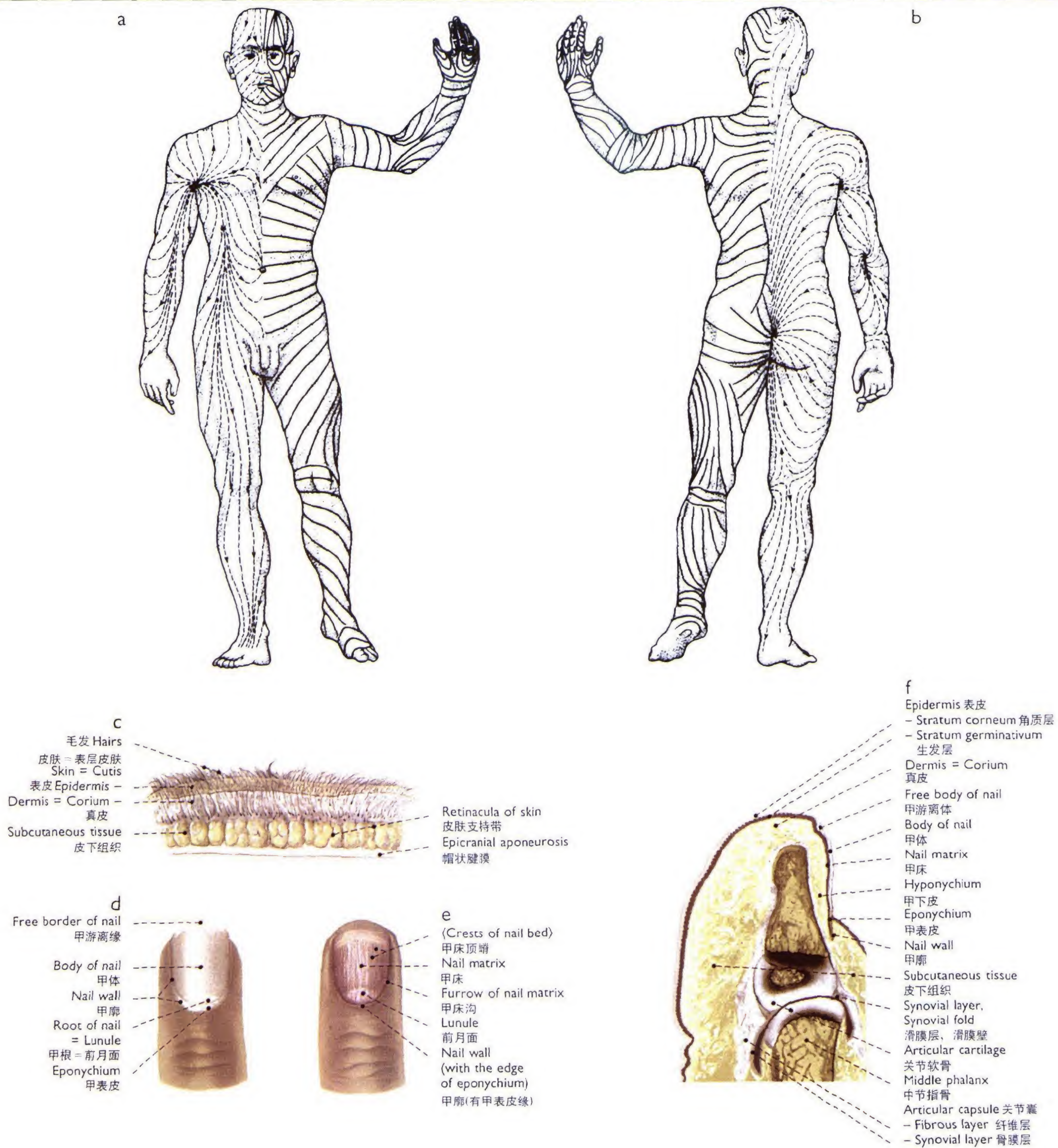
9 Joints 骨连结

- a Fibrous joint (syndesmosis) 纤维连结(韧带联合)
- b Example, ligaments of the glenohumeral girdle (75%), ventral aspect 示例: 盂肱韧带(75%), 前面观
- c Cartilaginous joint (synchondrosis) 软骨连结(软骨结合)
- d Example, epiphyseal cartilage in the proximal part of the femur 示例: 在12岁小孩(75%)股骨上端部分骺软骨, 冠状面 of a 12-year-old child (75%), coronal section
- e Bony union (osseous joint, synostosis) 骨联合(骨性连结, 骨性联合)
- f Example, sacrum (200%), ventral aspect 示例: 骶骨(200%), 前面观



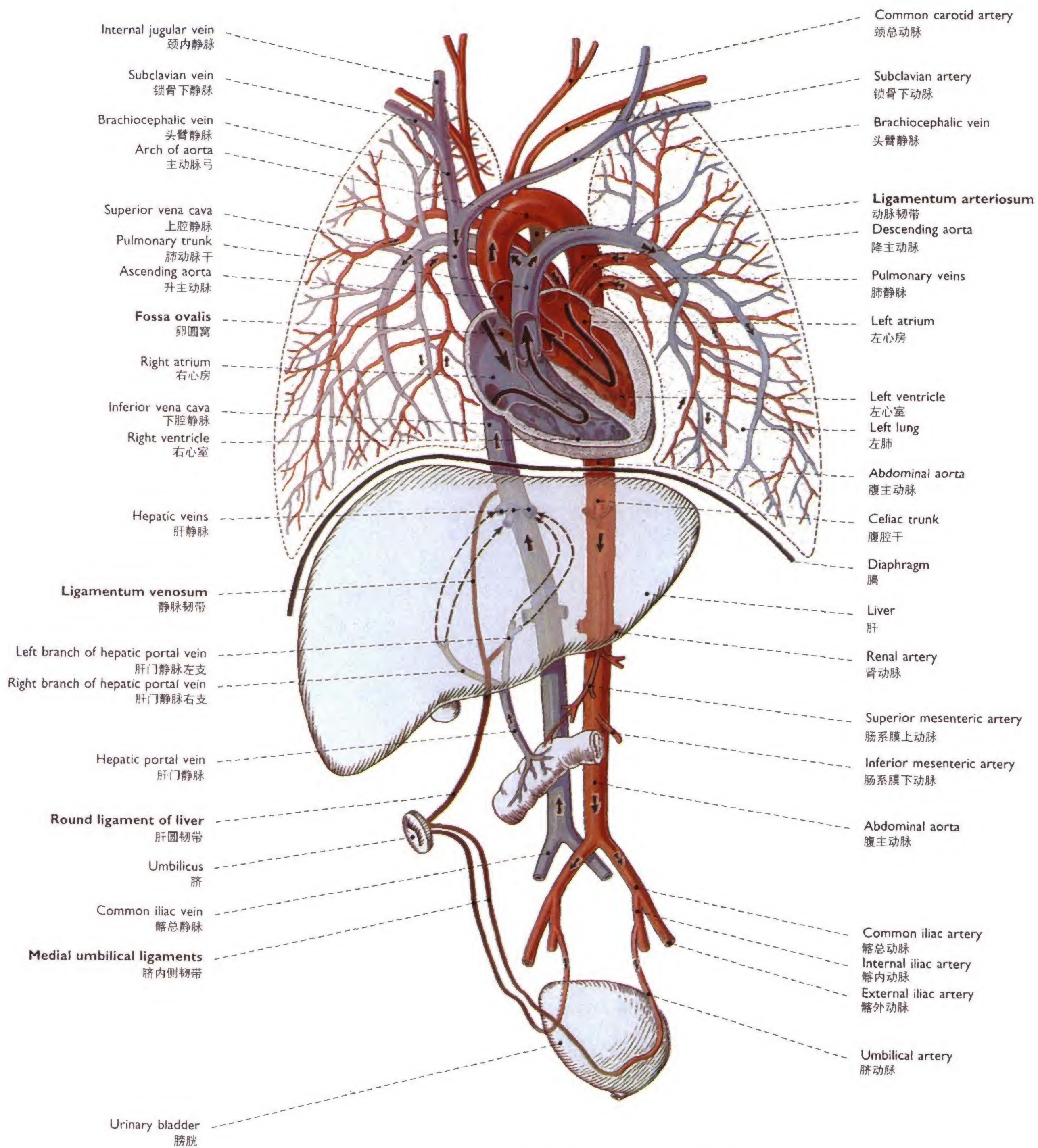
10 Synovial joint (diarthrosis), muscle and tendon 纤维连结(动关节), 肌和腱

- a Flexed right knee joint, sagittal section (60%), medial aspect of the lateral part 右膝关节屈位, 矢状面(60%), 外侧部分内面观
b Schematic section through a spheroidal joint 球状关节示意切面
c Parts of a muscle 肌的各部
d Tendon sheath, schematic representation 腱鞘, 示意图

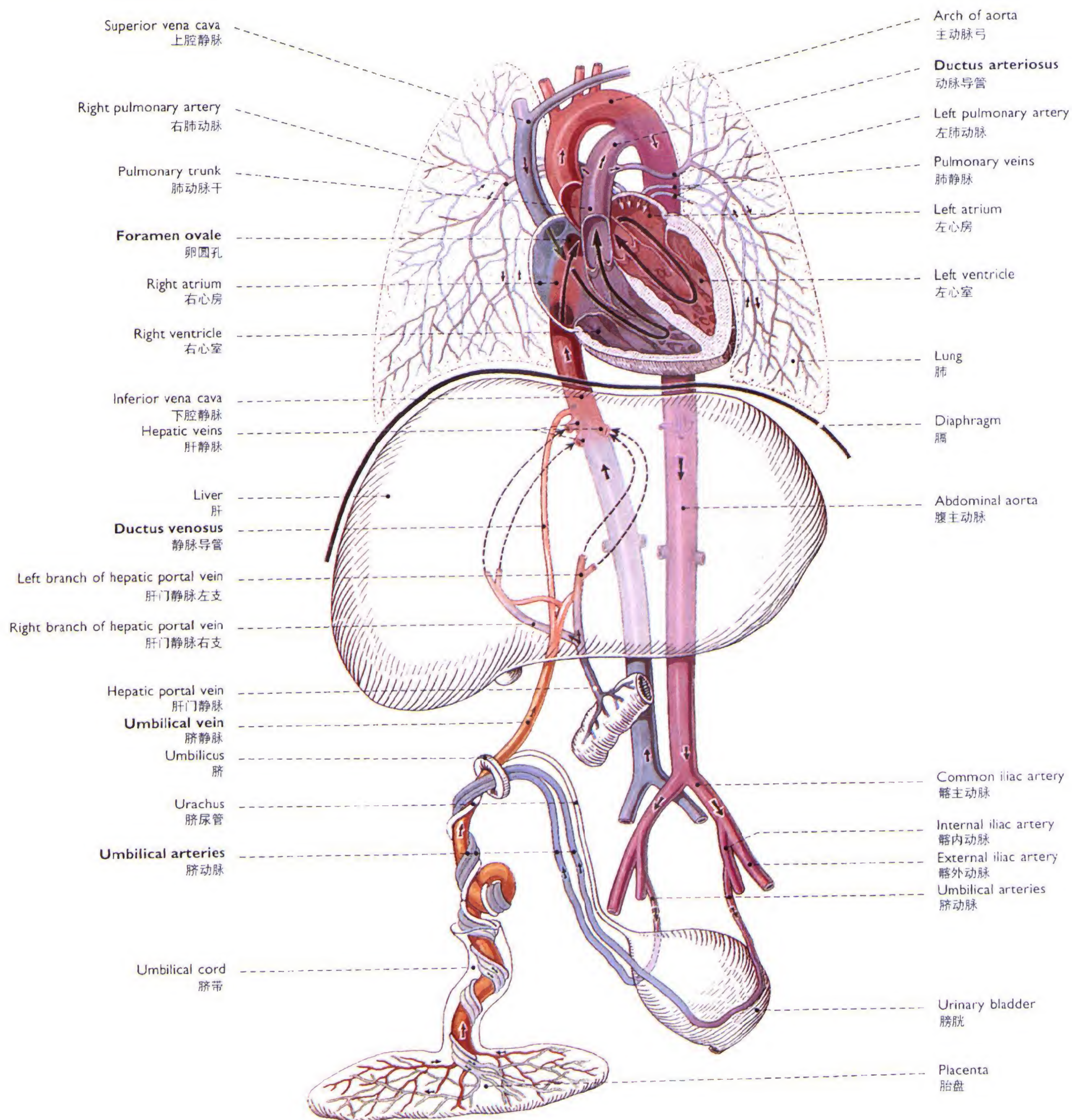


11 Skin and fingernail 皮肤和指甲

- a,b Hair streams (Flumina pilorum) on the right, cleavage lines on the left of the body 右侧毛发流, 左侧皮纹
- a Ventral aspect 前面观
- b Dorsal aspect 后面观
- c Skin of the head (400%), cross section 头部皮肤(40%), 切面
- d,e Fingernail, dorsal aspect 指甲, 后面观
- d Distal phalanx with nail (80%) 甲与末节指骨
- e Distal phalanx without body of nail (80%) 无甲体末节指骨
- f Distal phalanx (200%), longitudinal section 末节指骨, 纵切面



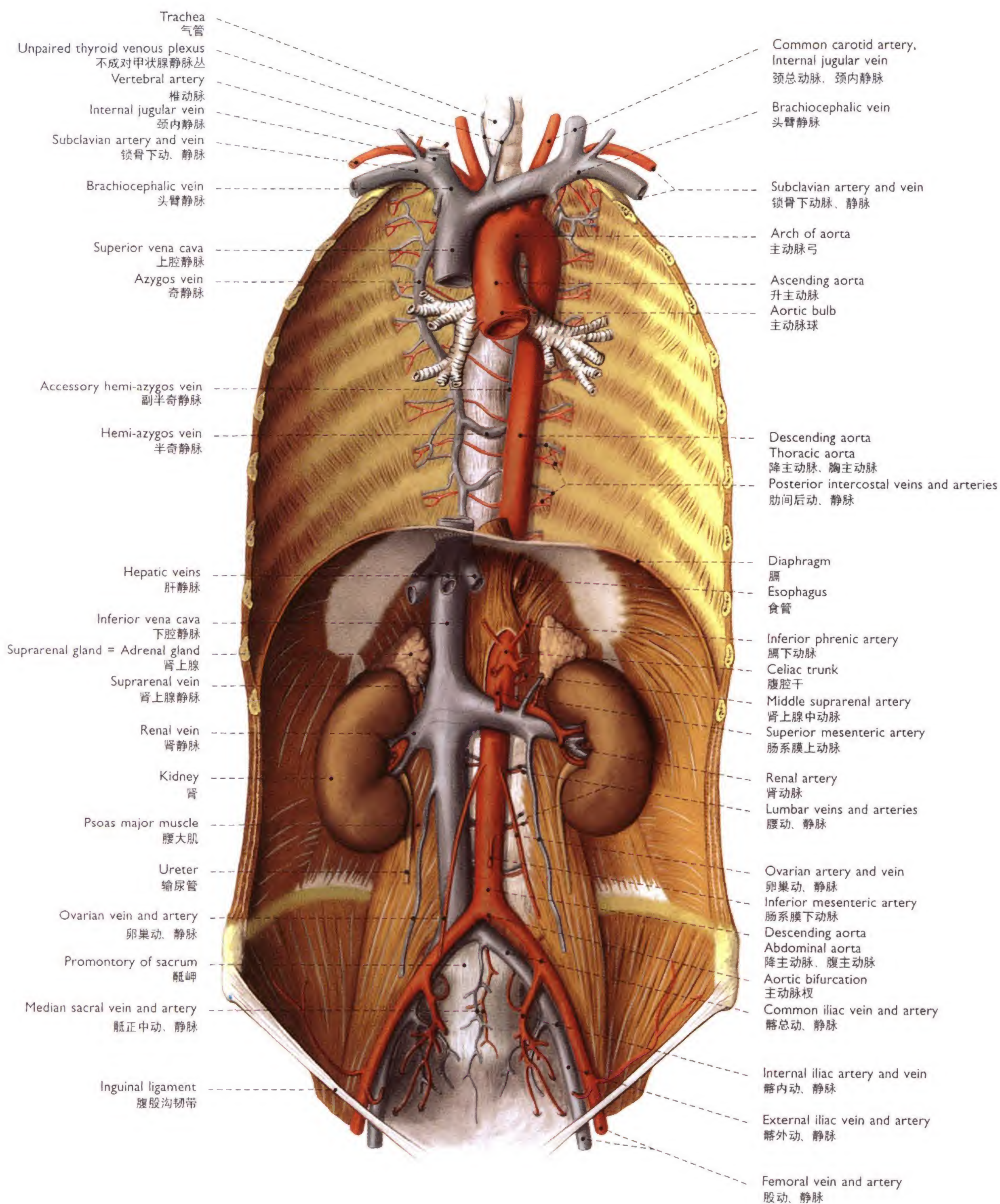
Arterial (oxygenated) blood **red**, 红色表示动脉血
 venous (deoxygenated) blood **blue**, 蓝色表示静脉血
 obliterated embryonic vessels **brown** 褐色表示退化的胚胎血管



Arterial (oxygenated) blood **red**, 红色表示动脉血
 venous (deoxygenated) blood **blue**, 蓝色表示静脉血
 mixed blood **violet** 紫色表示混合血

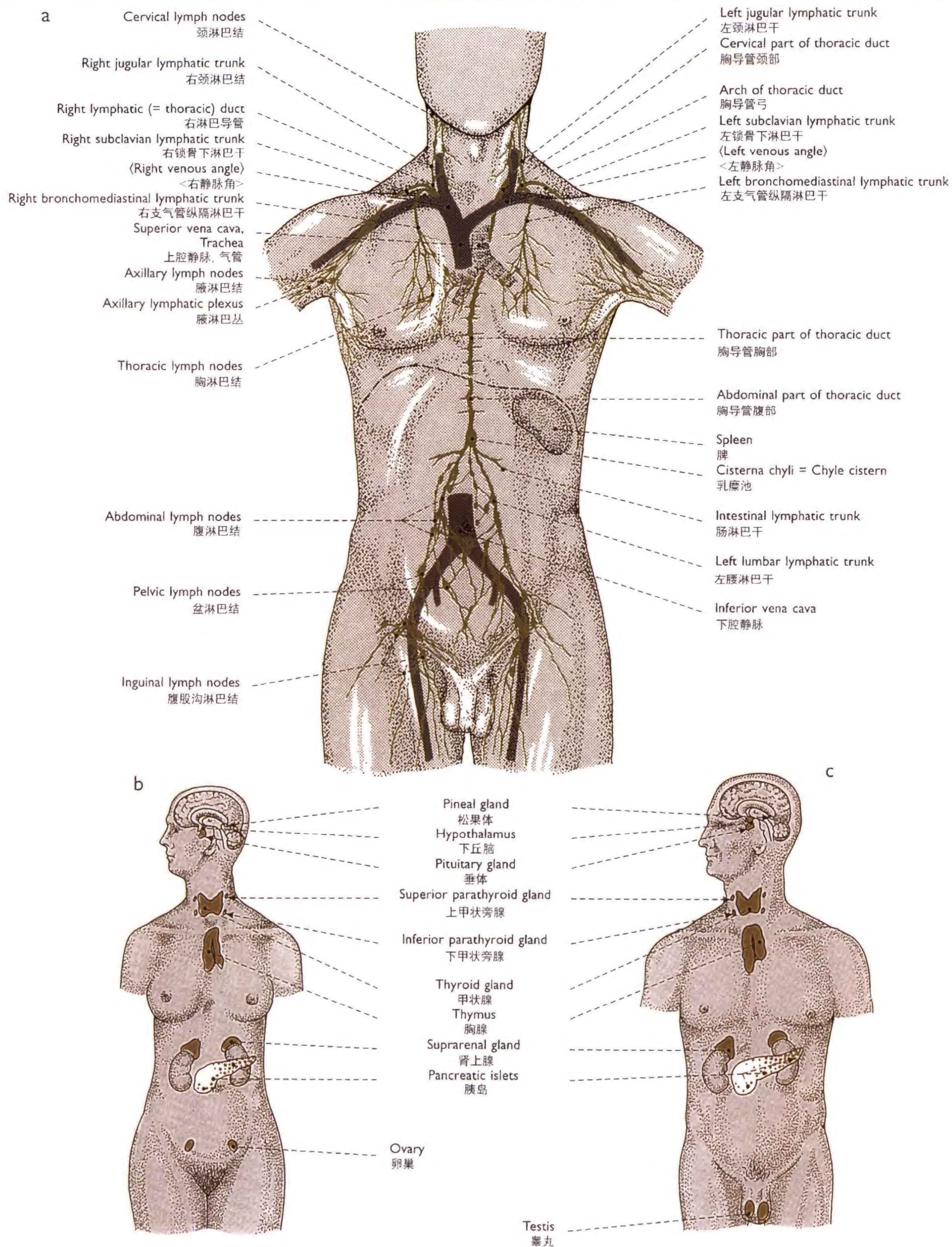
13 Fetal cardiovascular system 胎儿心血管系统

Ventral aspect 前面观



14 Blood vessels of the trunk (30%) 躯干血管(30%)

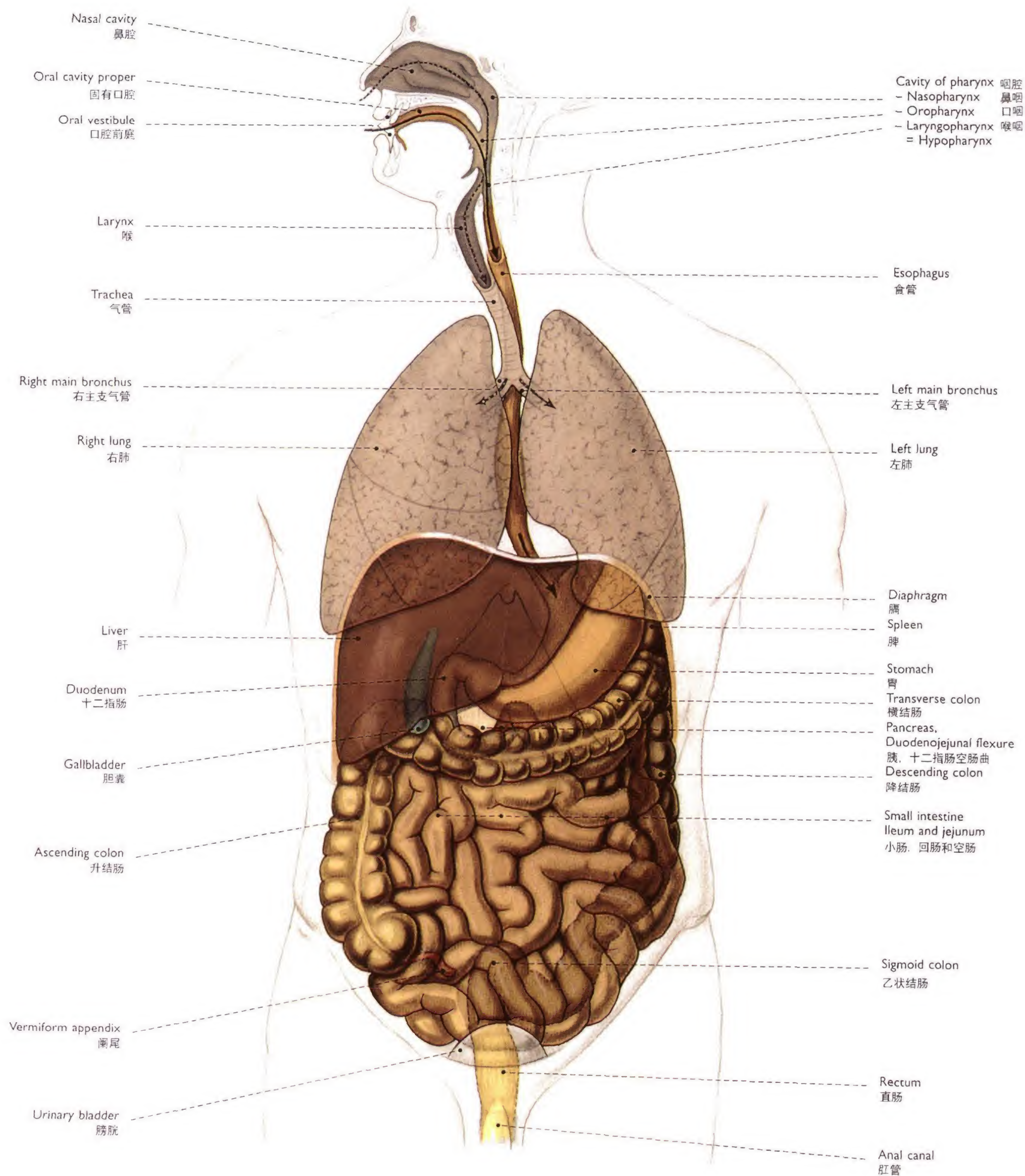
Ventral aspect 前面观



15 Lymphoid system and endocrine glands 淋巴系统和内分泌腺

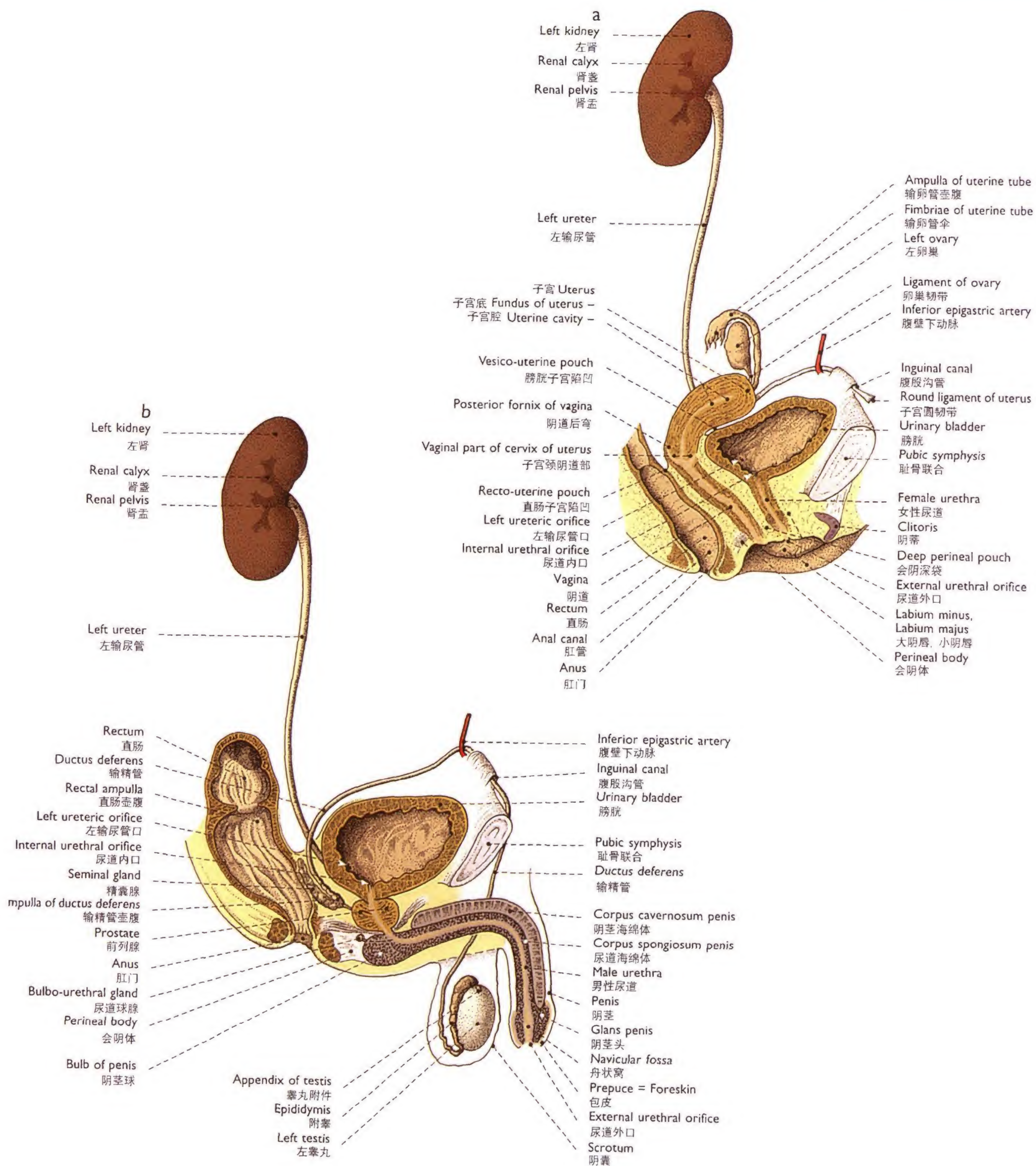
Ventral aspect 前面观

- a Lymphatic trunks and ducts, lymphoid organs 淋巴干和导管、淋巴器官
b Female endocrine glands 女性内分泌腺
c Male endocrine glands 男性内分泌腺



16 Alimentary and respiratory systems (25%) 消化和呼吸系统(25%)

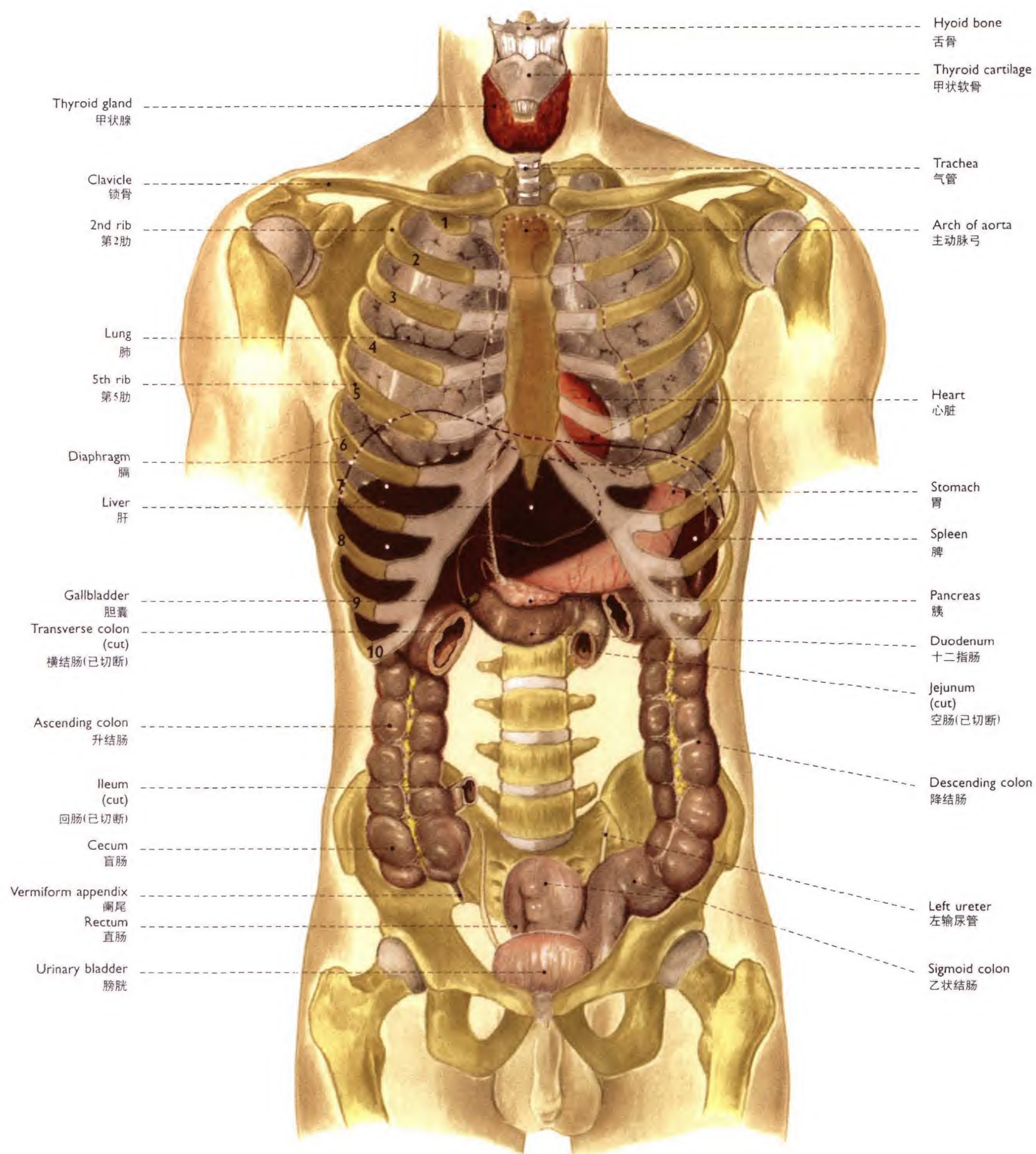
Ventral aspect 前面观



17 Urinary and genital systems (40%) 泌尿和生殖系统(40%)

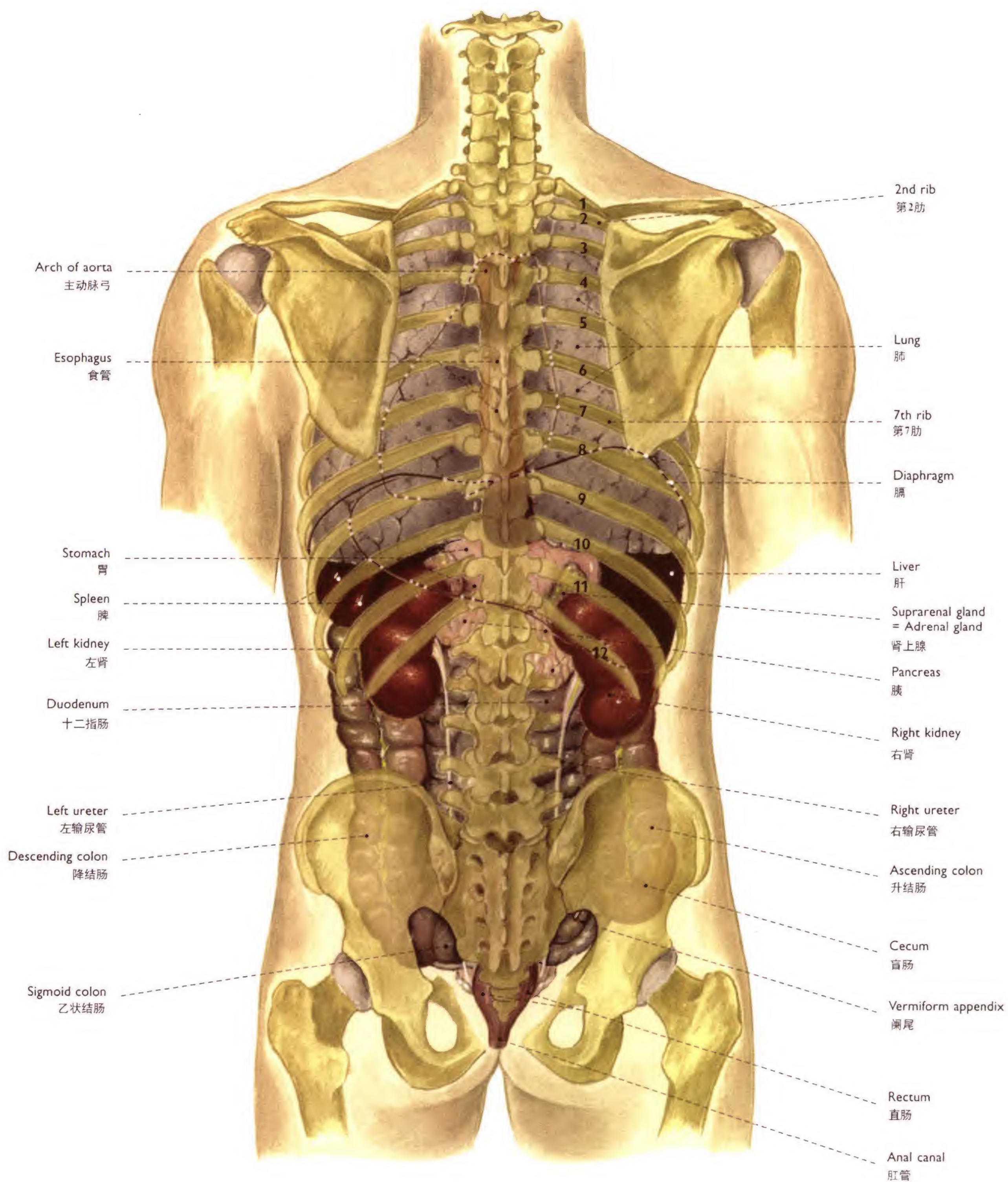
Schematized median section, medial aspect of the left half 正中切面示意图, 左半侧面观

- a Female 女性
b Male 男性

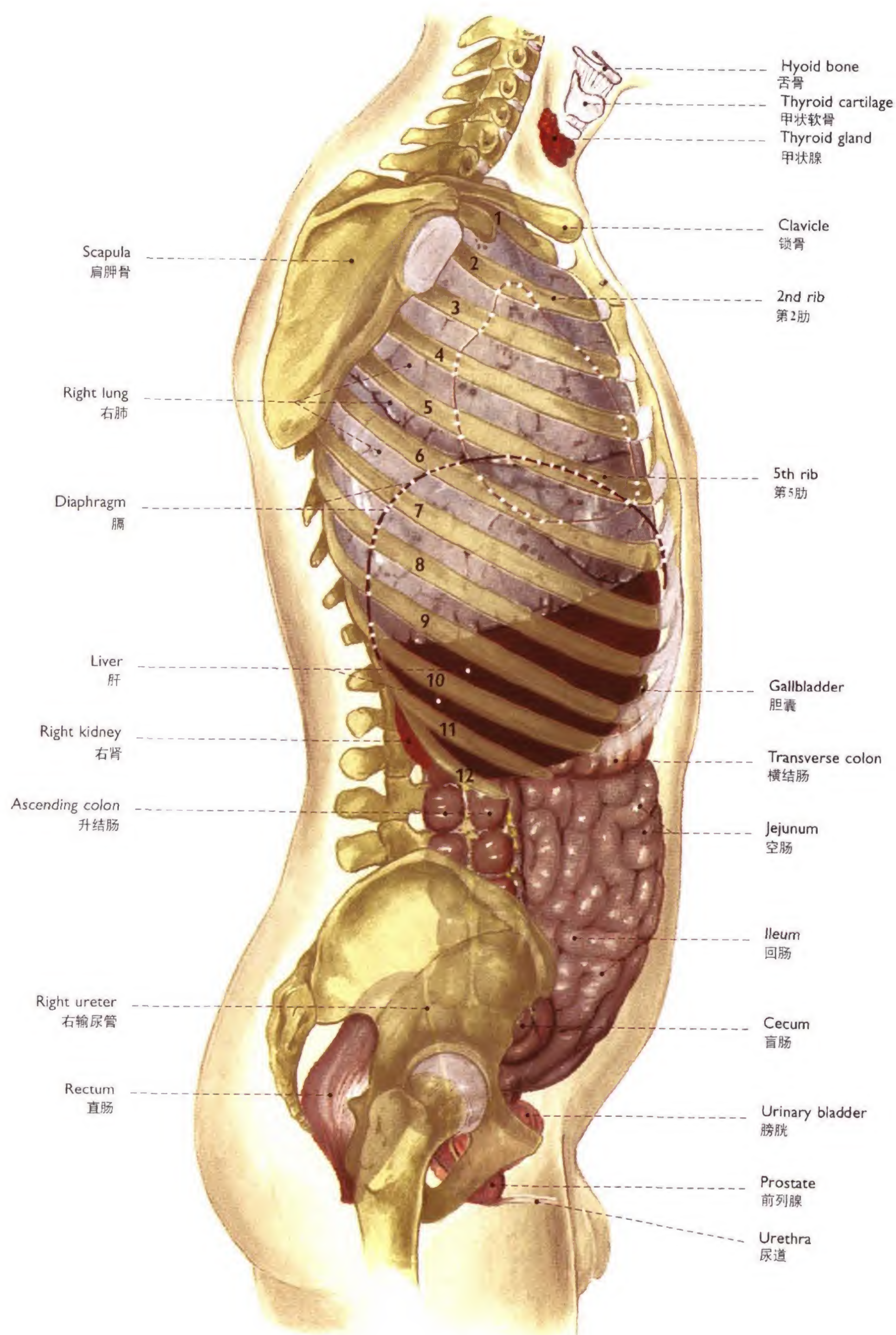


18 Surface projections of thoracic and abdominal viscera (25%) 胸腹脏器体表投影(25%)

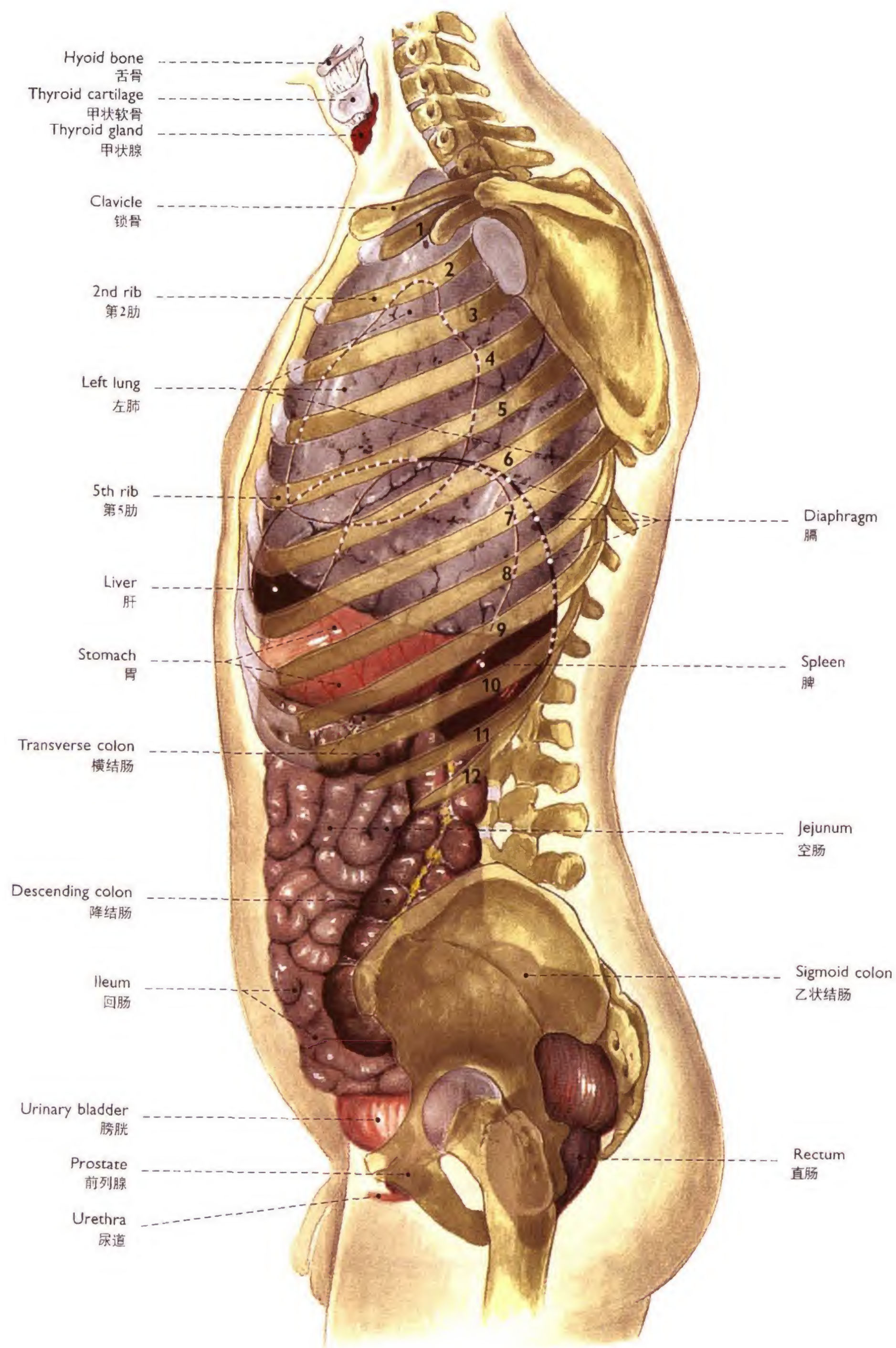
Jejunum, ileum, and transverse colon were removed. Ventral aspect 空肠、回肠和横结肠已切除, 前面观



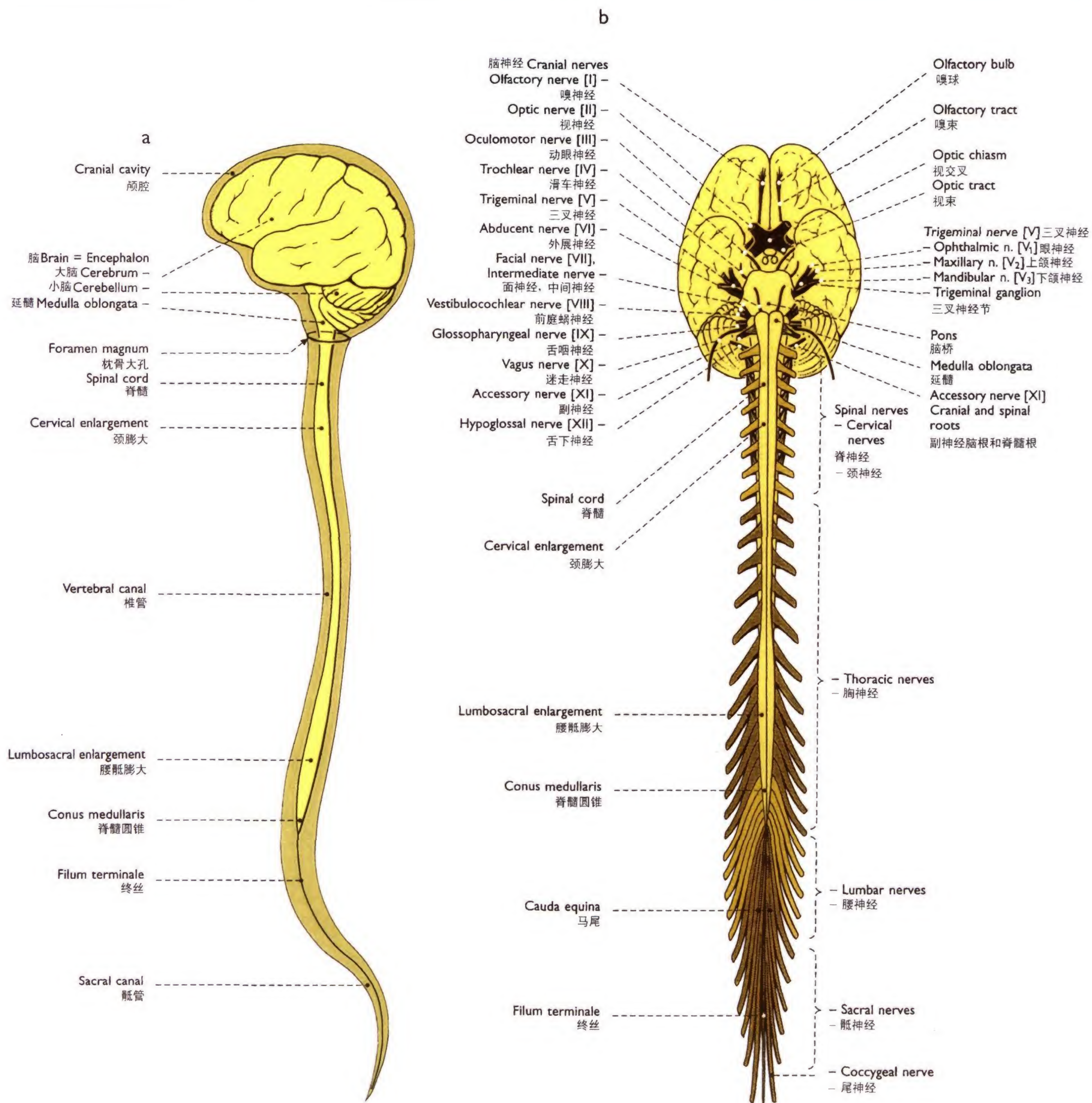
19 Surface projections of thoracic and abdominal viscera (25%) 胸腹脏器体表投影(25%)
Dorsal aspect 后面观



20 Surface projections of thoracic and abdominal viscera (25%) 胸、腹部内脏体表投影(25%)
Right lateral aspect 右侧面观



21 Surface projections of thoracic and abdominal viscera (25%) 胸、腹部内脏体表投影(25%)
Left lateral aspect 左侧面观



22 Central and peripheral nervous systems 中枢和周围神经系统

a Central nervous system, left lateral aspect 中枢神经系统 左侧面观
b Cranial and spinal nerves, ventral aspect 脑神经和脊神经 前面观

a

内侧支 Medial branch
外侧支 Lateral branch
Posterior (dorsal) ramus of spinal nerve
脊神经后支

Trunk of spinal nerve
脊神经干
Meningeal ramus of spinal nerve
脊神经脊膜支
Ganglion of sympathetic trunk
交感干神经节
Interganglionic branch
节间支
Anterior (ventral) ramus of spinal nerve
脊神经前支
Gray and white rami communicantes
灰、白交通支

Lateral pectoral cutaneous branch
胸神经外侧皮支

Anterior pectoral cutaneous branch
胸神经前皮支

Posterolateral sulcus of spinal cord
脊髓后外侧沟
Anterolateral sulcus of spinal cord
脊髓前外侧沟
Posterior rootlets
后根丝

Anterior rootlets
前根丝
Posterior (dorsal) root of spinal nerve
脊神经后(背)根
Spinal ganglion
脊神经节
Anterior (ventral) root
前(腹)根
Trunk of spinal nerve
脊神经干

b

Posterior (dorsal) horn
后(背)角

Posterior (dorsal) root of spinal nerve
脊神经后(背)根

Spinal ganglion
脊神经节

Anterior (ventral) horn
前(腹)角

Anterior (ventral) root of spinal nerve
脊神经前(腹)根

脊神经 Spinal nerve
后(背)支 Posterior (dorsal) ramus

Meningeal ramus
脊膜支

White ramus communicans
白交通支

Gray ramus communicans
灰交通支

Anterior (ventral) ramus
前(腹)支

Ganglion of sympathetic trunk
交感干神经节

Somatic efferent nerve fiber
躯体传出纤维
Somatic afferent nerve fiber
躯体传入纤维
Visceral efferent nerve fiber
内脏传出纤维
Visceral afferent nerve fiber
内脏传入纤维
Interneuron
中间神经元

The interrupted lines indicate postganglionic visceral or secondary somato-afferent fibers, respectively.
虚线分别表示节后内脏神经或二级躯体传入神经

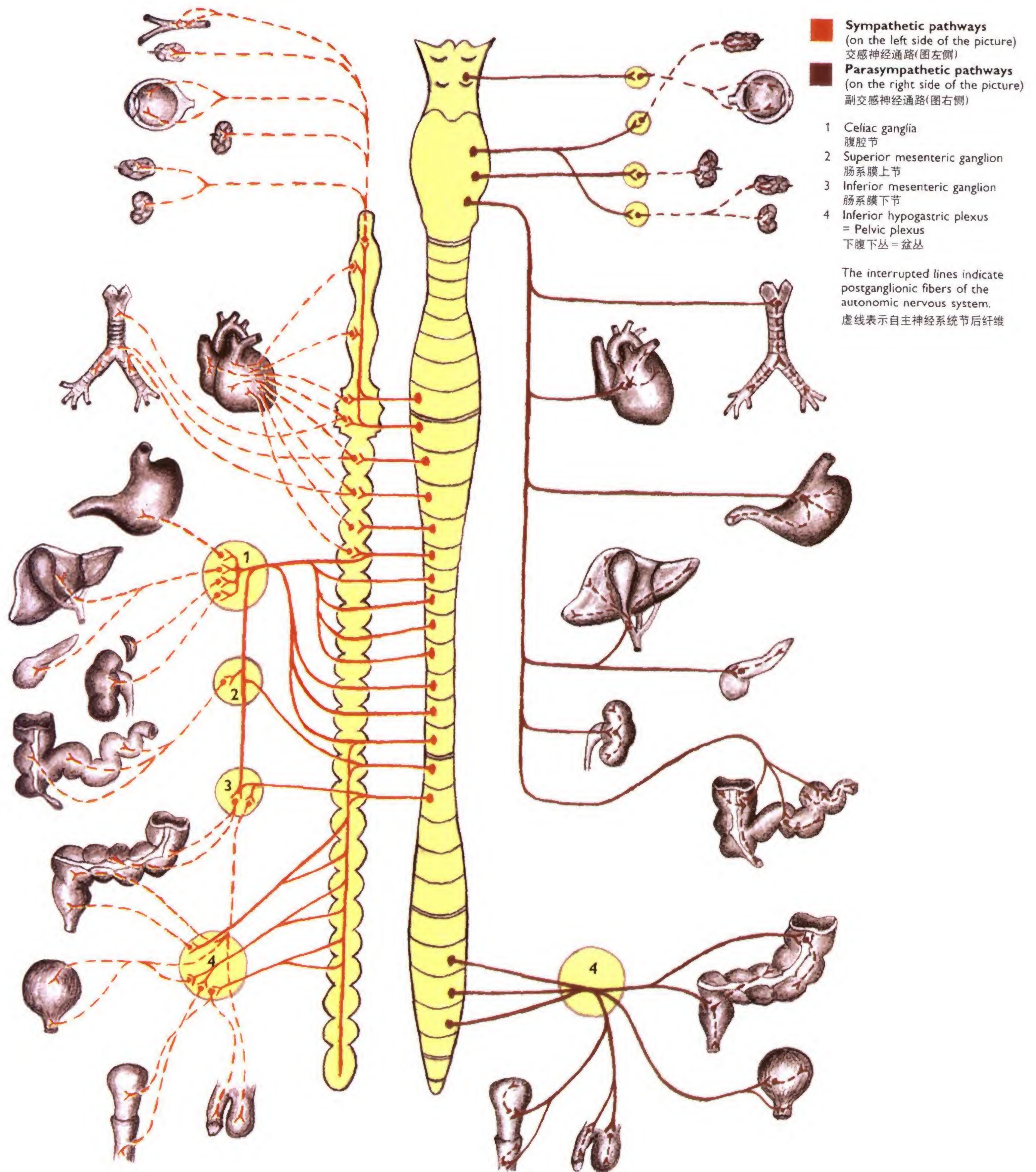
23 Spinal cord and spinal nerves 脊髓和脊神经

Ventral aspect 前面观

a Distribution and

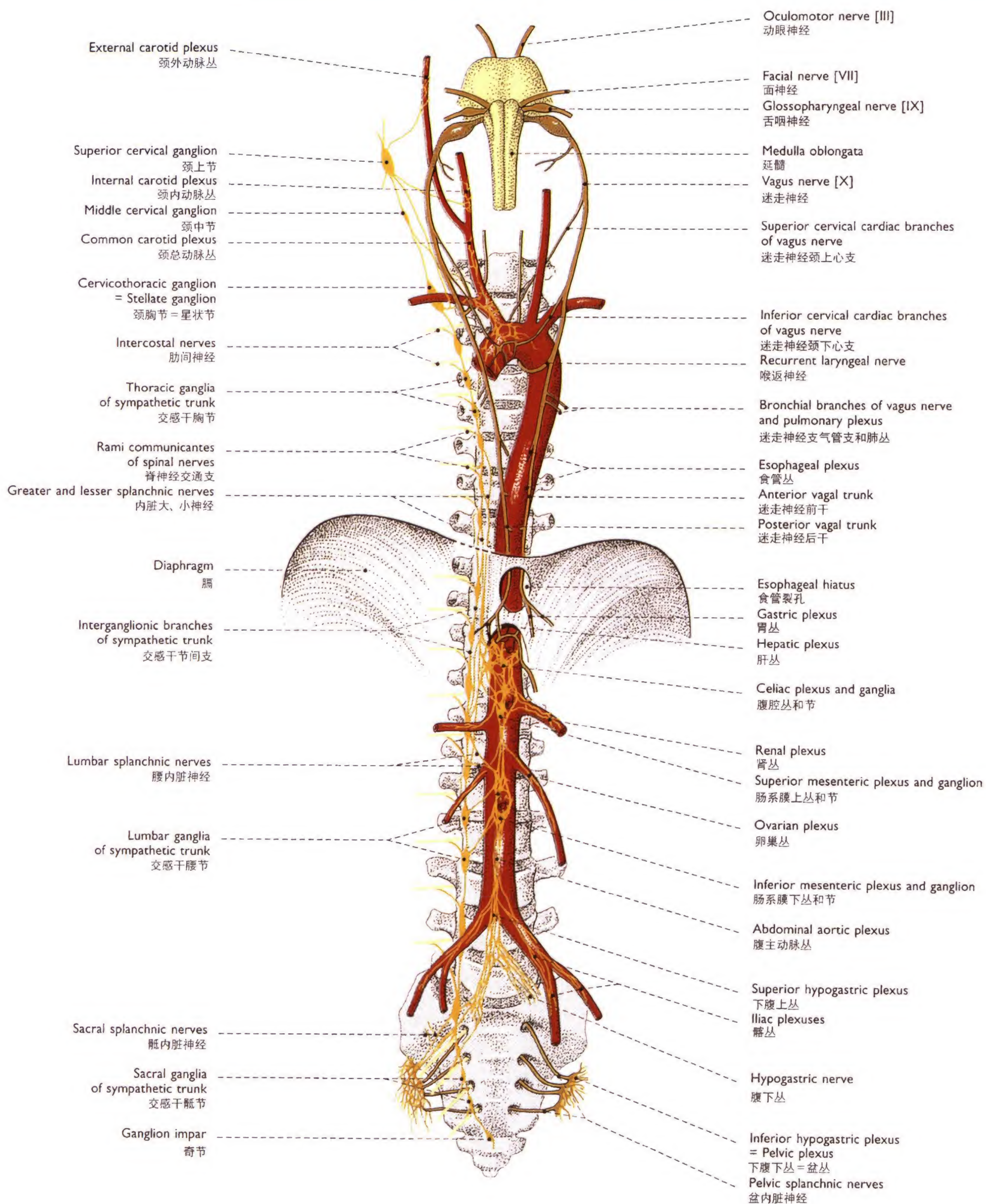
b Construction

of typical spinal nerves (thoracic nerves) 典型脊神经(胸神经)的(a)分布和(b)构成



24 Autonomic division of the peripheral nervous system 周围神经系统自主神经部分

Origins, essential circuitry, and peripheral innervation of the sympathetic and parasympathetic nervous systems. 交感神经和副交感神经系统的来源、主要经行及分布模式示意图。前面观



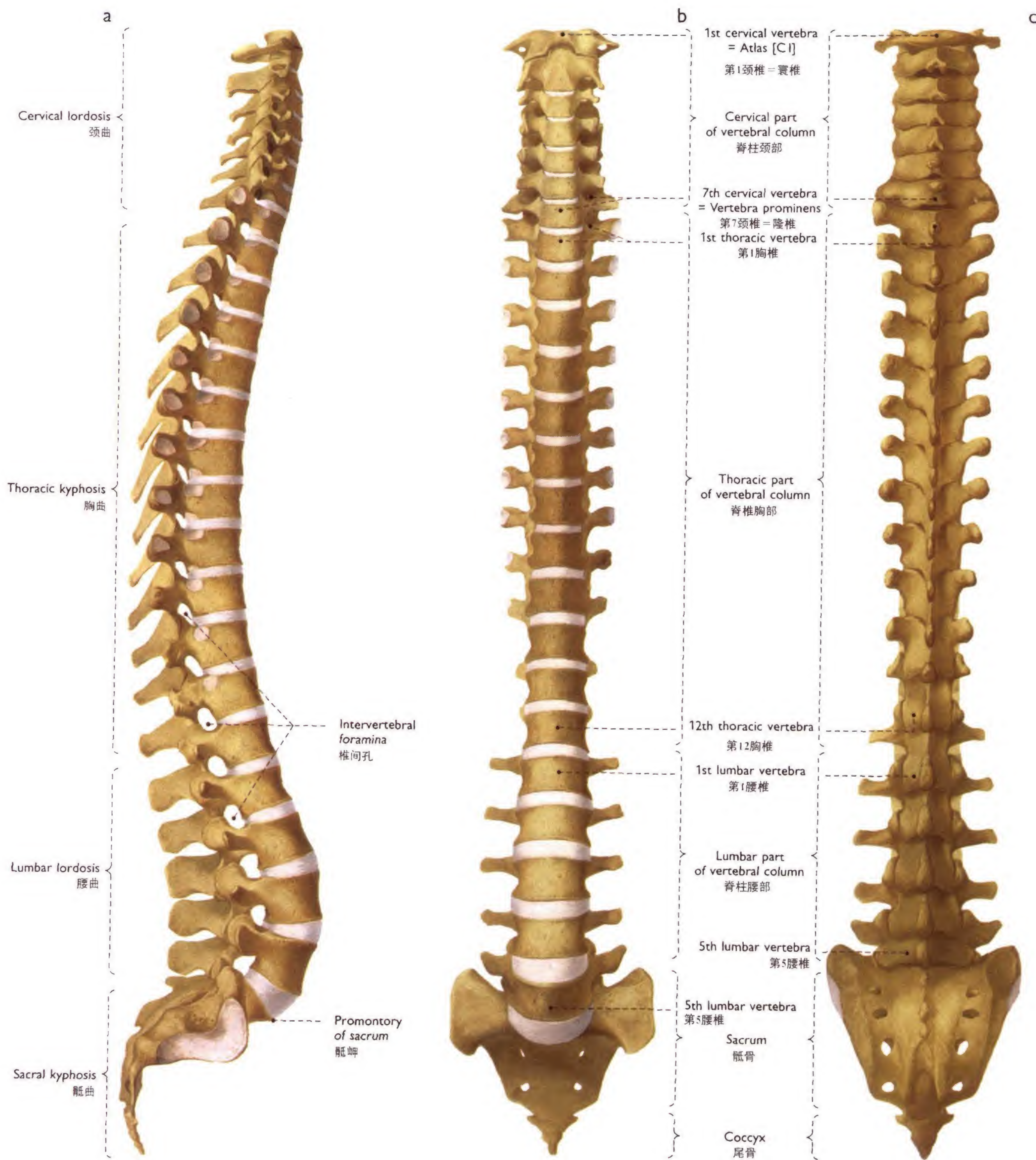
25 Autonomic division

of the peripheral nervous system (25%) 周围神经系统自主神经部分

Peripheral sympathetic (orange) and parasympathetic (brown) 交感神经(橙色)和副交感神经(褐色)
nerves and ganglia. The sympathetic components are shown 周围神经和神经节交感神经组成仅
only on the left side of the picture. Ventral aspect 在此图左边显示, 前面观

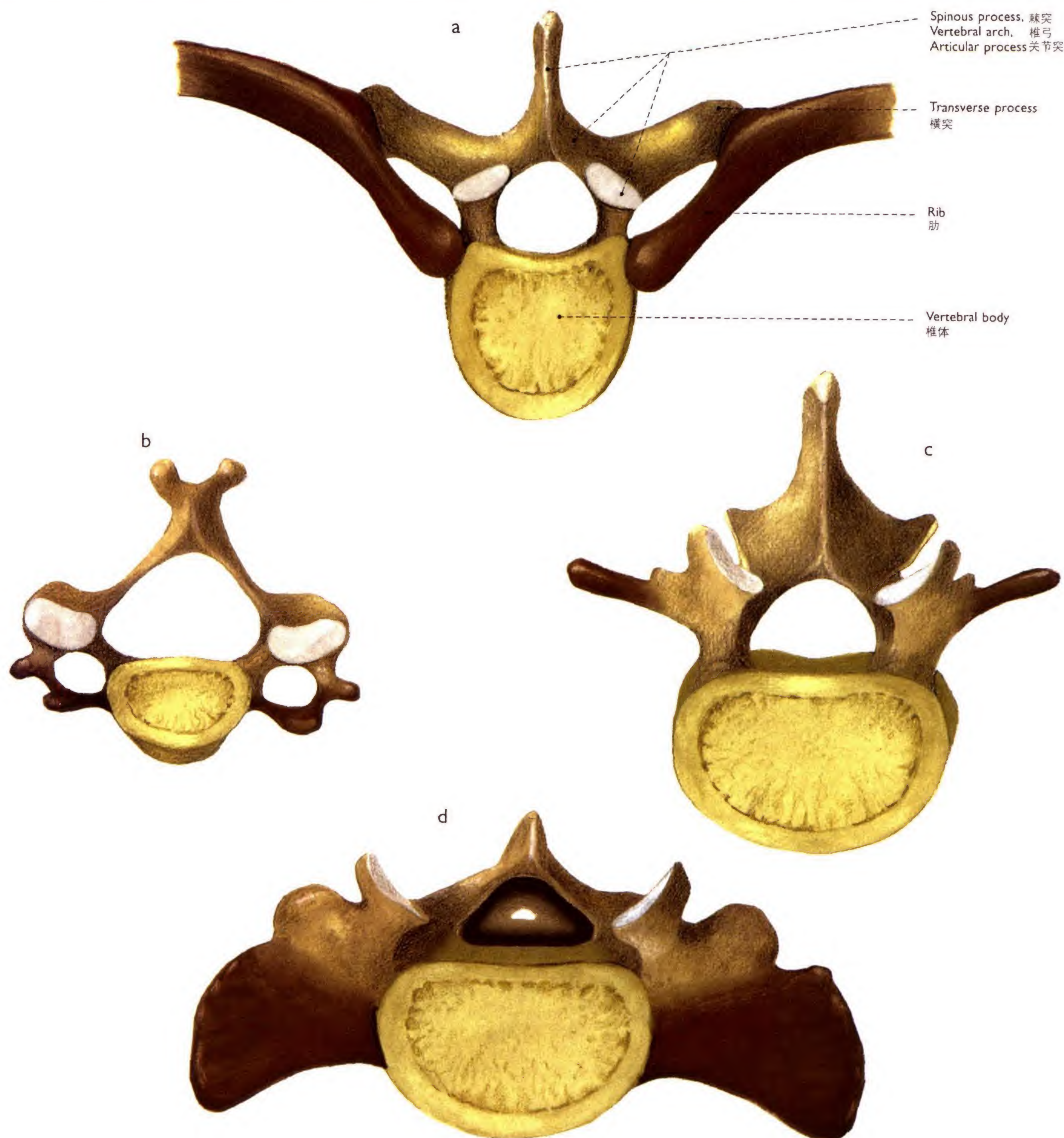
Body Wall

体 壁



28 Vertebral column (30%) 脊柱

- a Right lateral aspect 右侧面观
- b Ventral aspect 前面观
- c Dorsal aspect 后面观

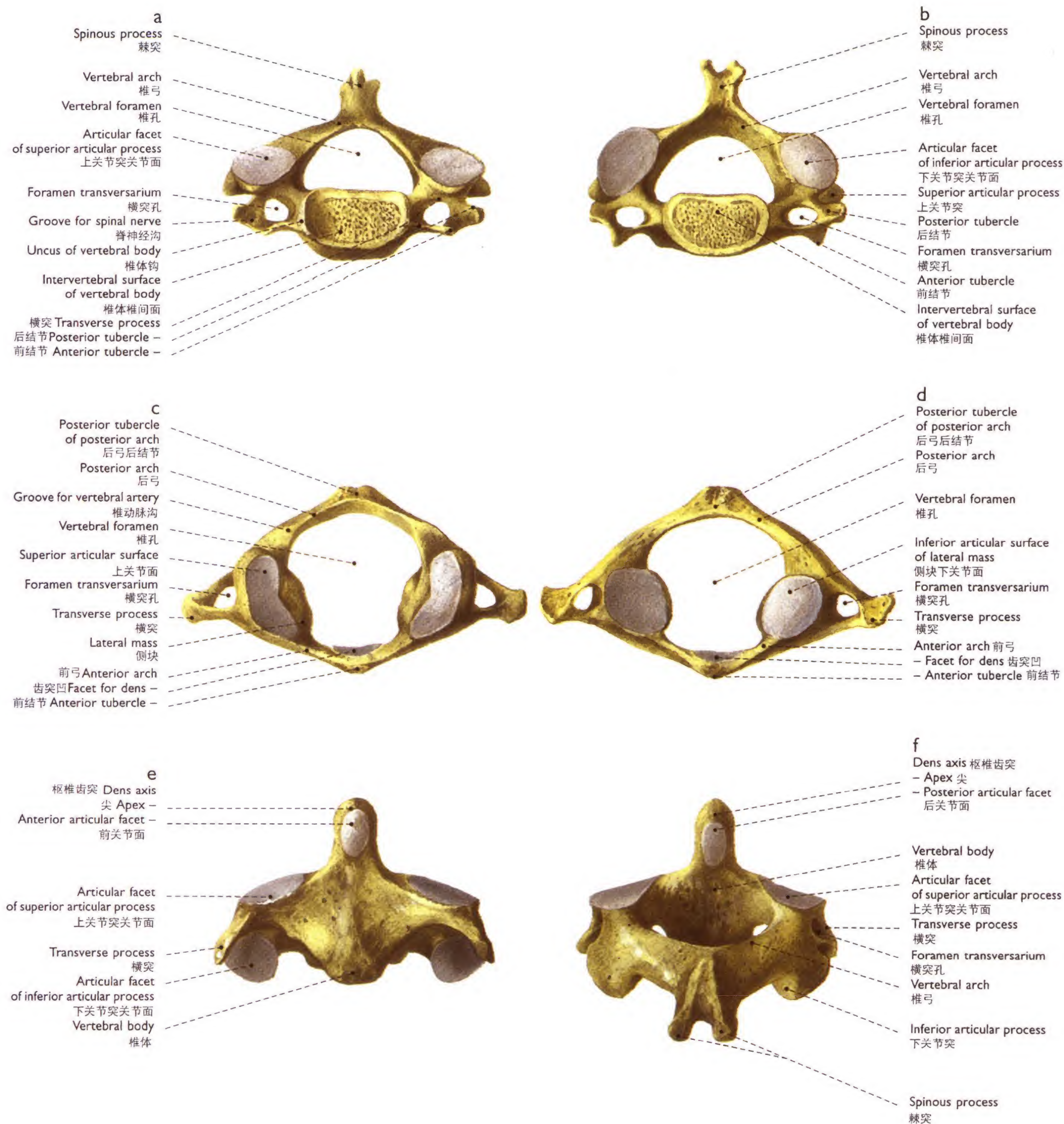


29 Homology of parts of vertebrae 椎骨各部同源性

Homologous parts of vertebrae are represented by the same color. 椎骨各部同源性用同一色彩表示

Cranial aspect 上面观

- a Thoracic vertebra with ribs 胸椎和肋
- b Cervical vertebra 颈椎
- c Lumbar vertebra 腰椎
- d Sacrum 骶骨



30 Cervical vertebrae (90%) 颈椎

a, b Middle cervical vertebra 中段颈椎

a Cranial aspect 上面观

b Caudal aspect 下面观

c, d First cervical vertebra = atlas [C I] 第1颈椎 = 寰椎 [C I]

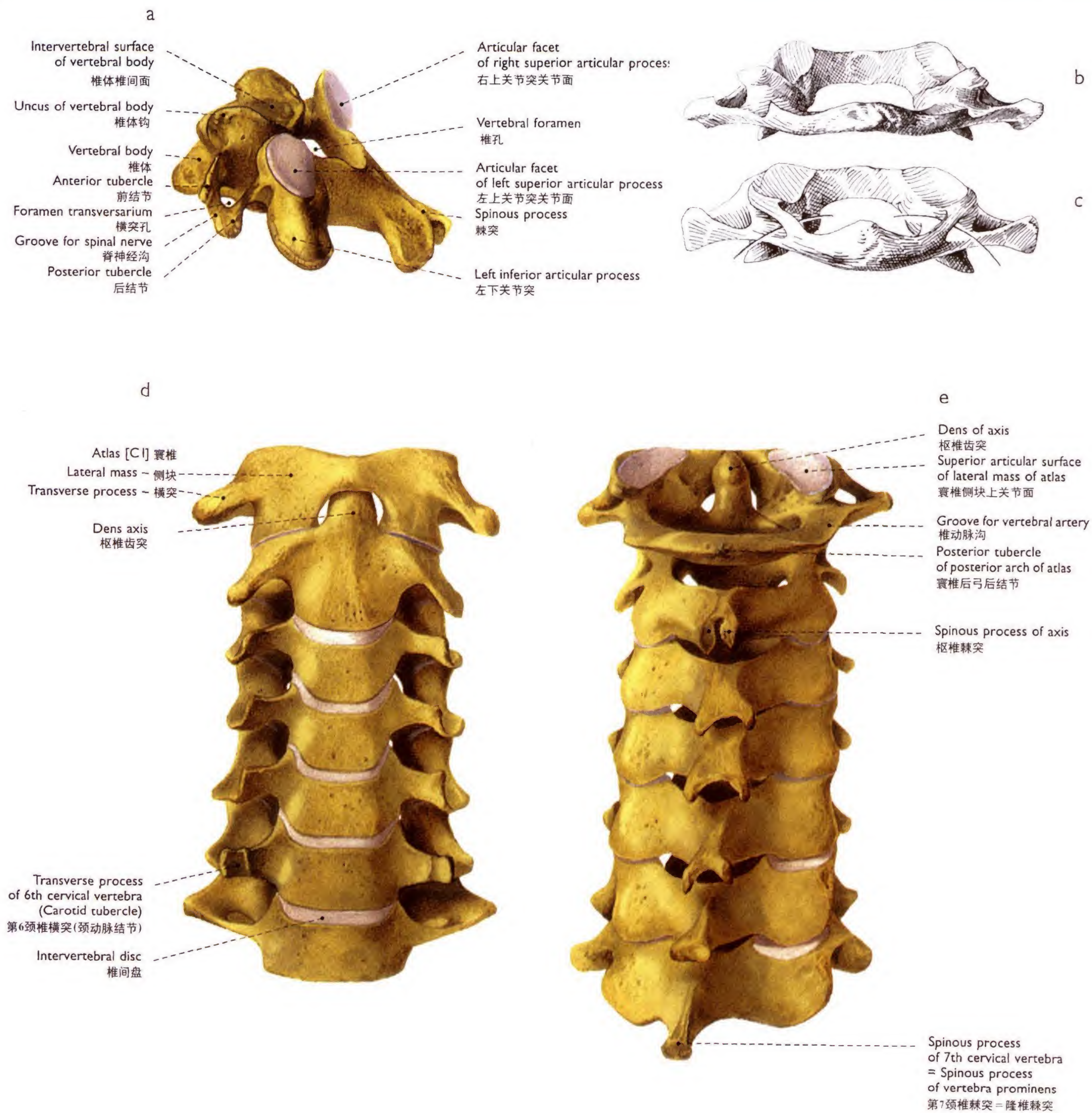
c Cranial aspect 上面观

d Caudal aspect 下面观

e, f Second cervical vertebra = axis [C II] 第2颈椎 = 枢椎 [C II]

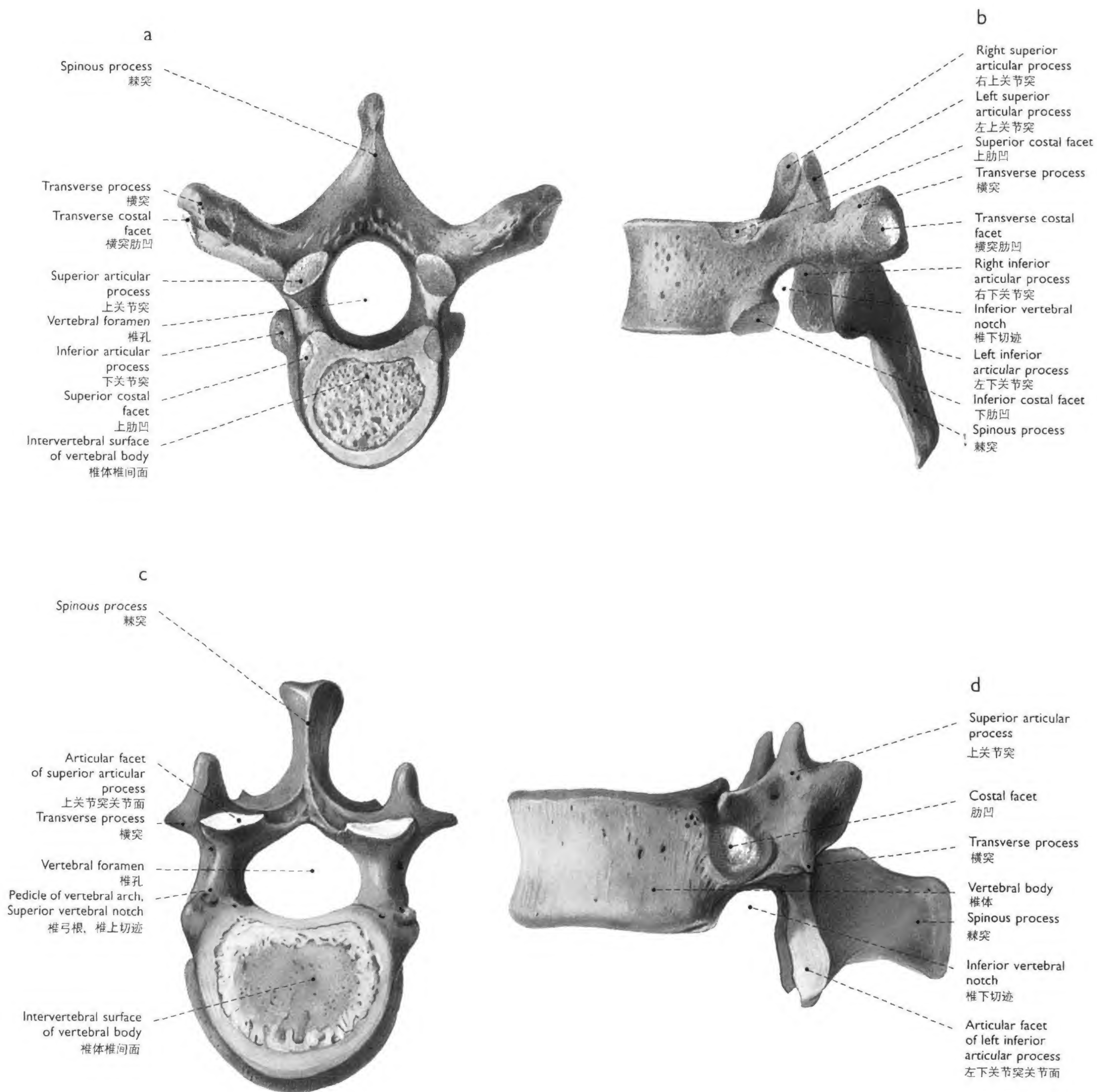
e Ventral aspect 前面观

f Dorsal aspect 后面观



31 Cervical vertebrae and cervical spine 颈椎和脊柱颈段

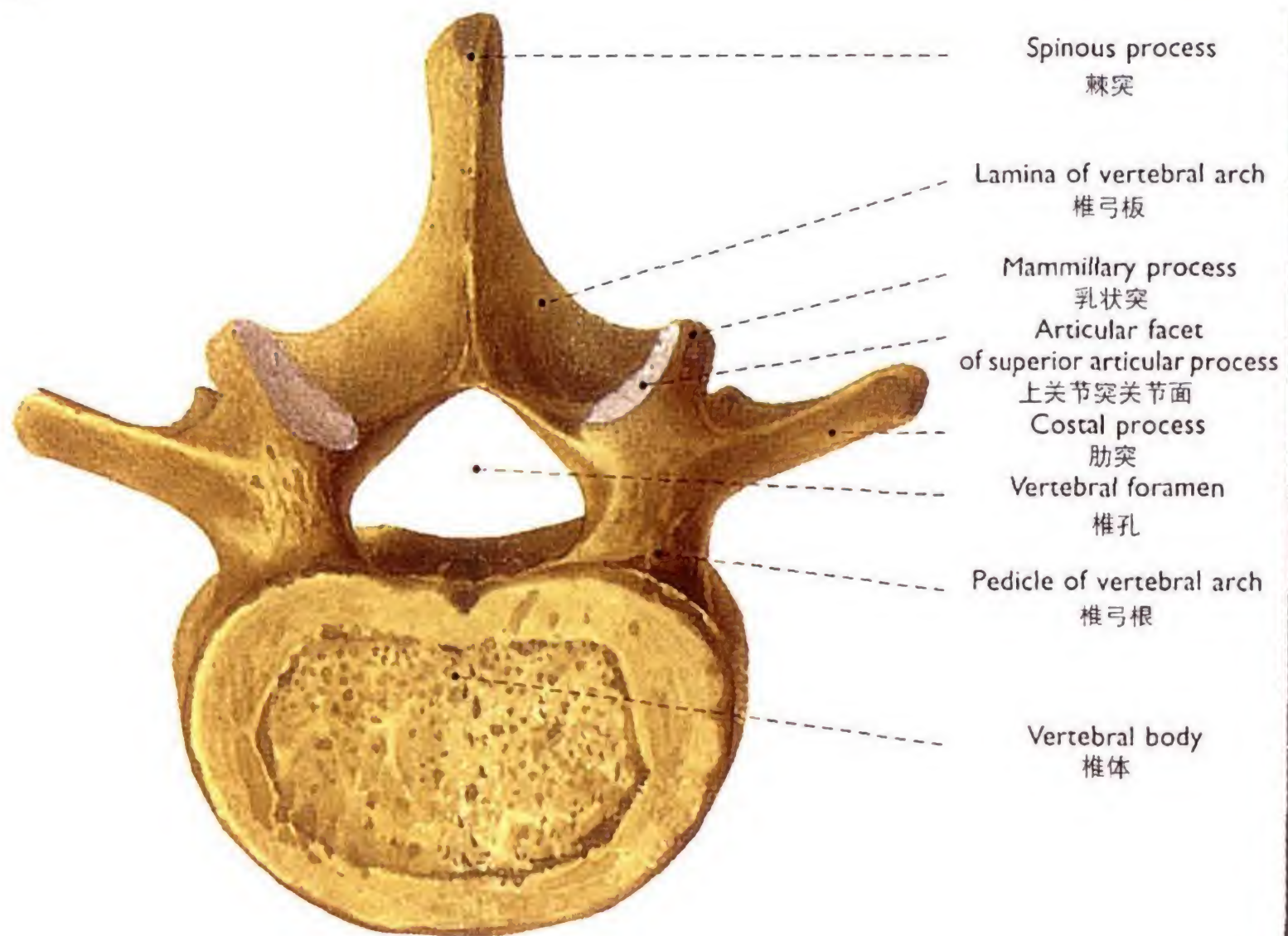
- a Middle cervical vertebra (90%), left lateral aspect 中段颈椎, 左侧面观
- b, c First cervical vertebra = atlas [C1], dorsal aspect 第1颈椎 = 寰椎 [C1], 后面观
- b Deep groove for the vertebral artery on both sides 双侧深椎动脉沟
- c Canal for the vertebral artery on both sides 双侧椎动脉管
- d, e Cervical spine with intervertebral discs (100%) 借椎间盘连结的脊柱颈段
- d Ventral aspect 前面观
- e Dorsal aspect 后面观



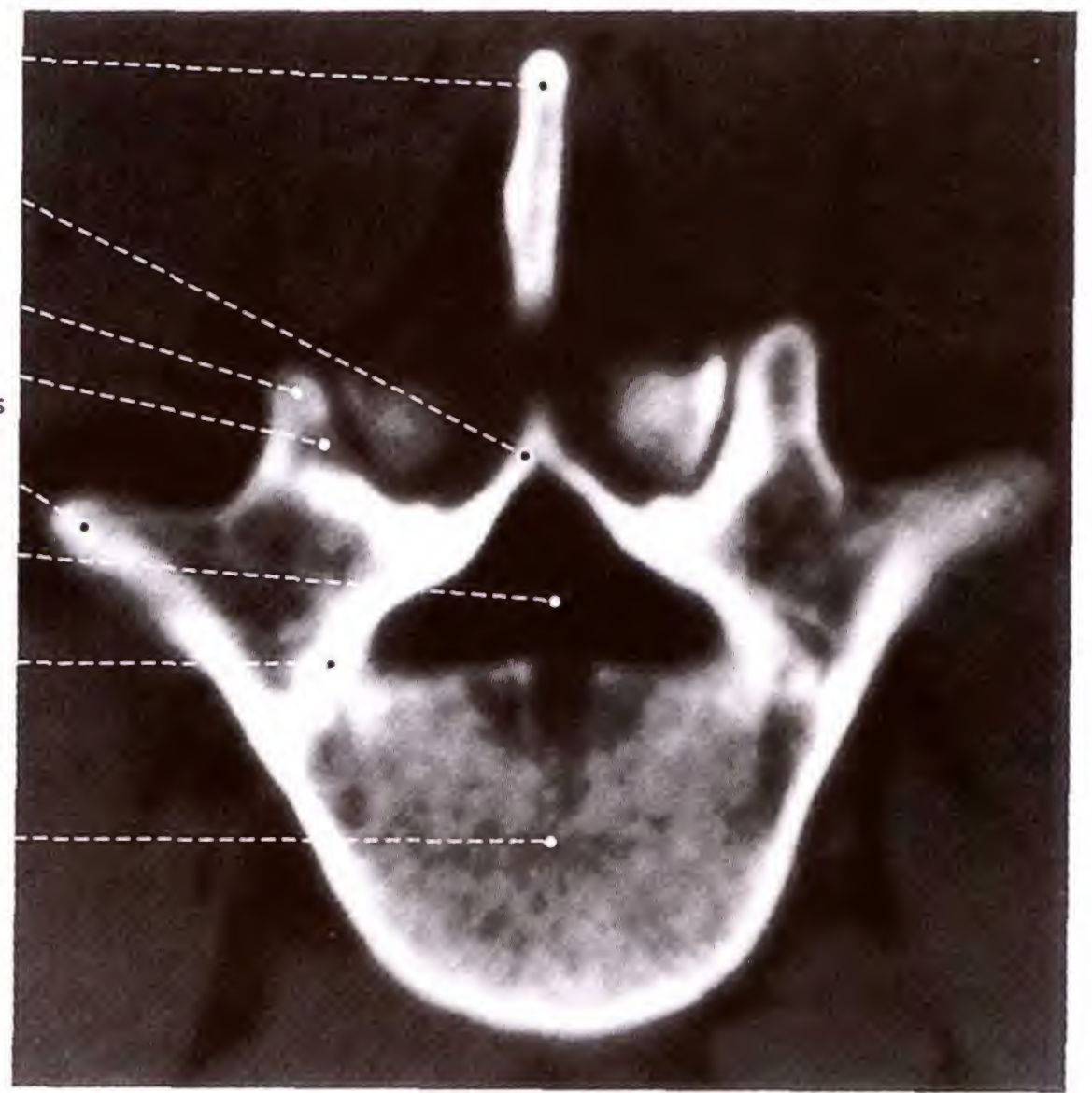
32 Thoracic vertebrae (100%) 胸椎

- a, b Sixth thoracic vertebra 第6胸椎
- a Cranial aspect 上面观
- b Left lateral aspect 左侧面观
- c, d Twelfth thoracic vertebra 第12胸椎
- c Cranial aspect 上面观
- d Left lateral aspect 左侧面观

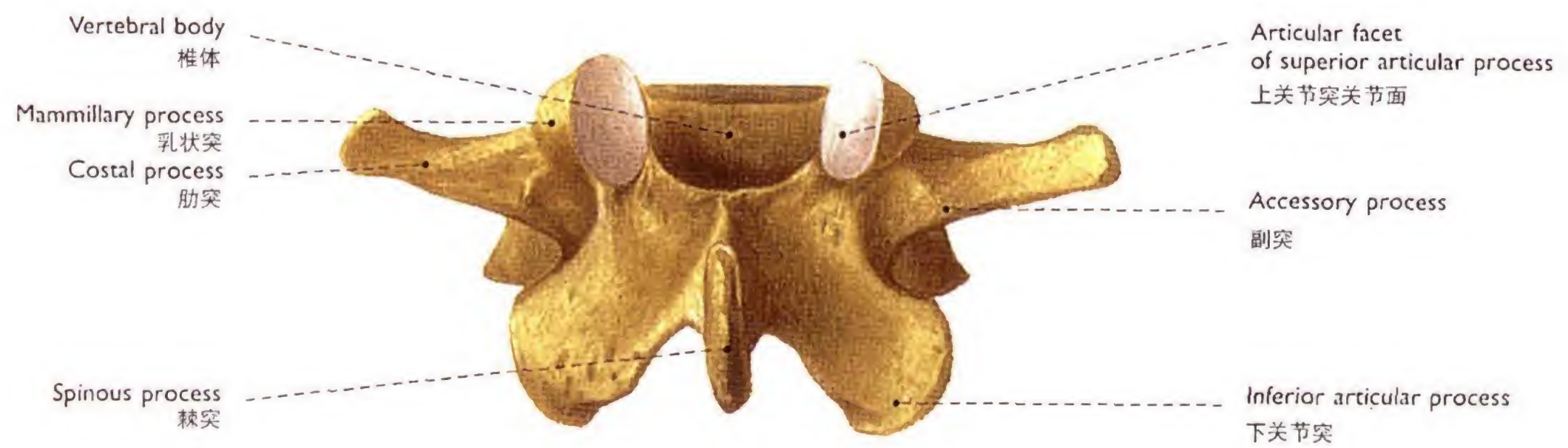
a



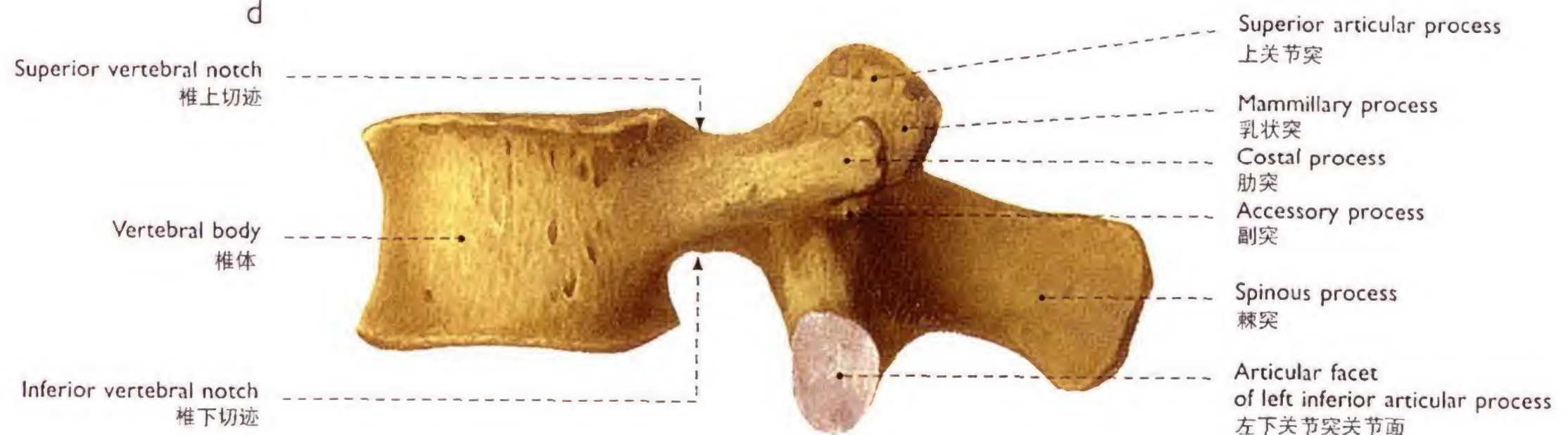
b



c

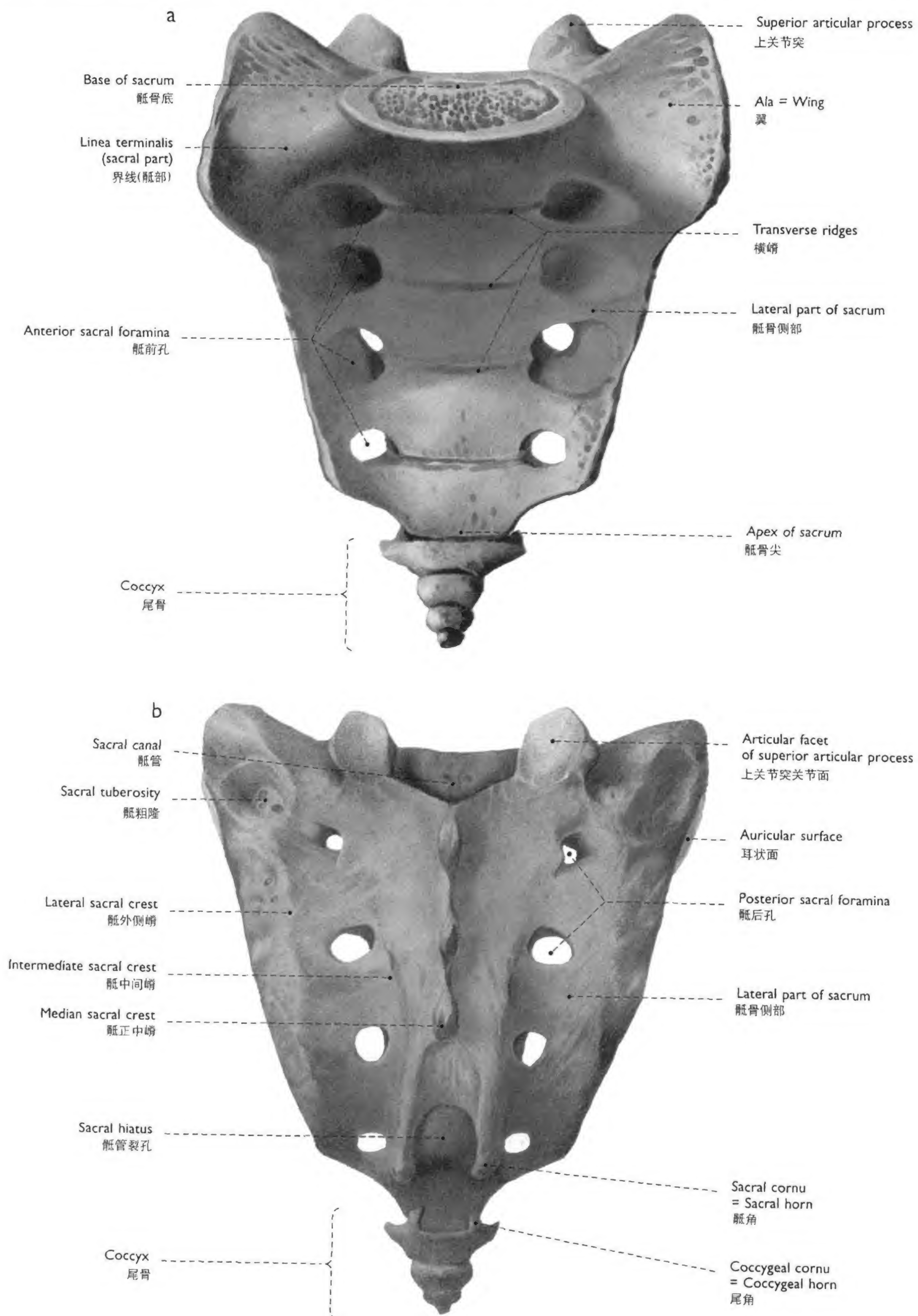


d



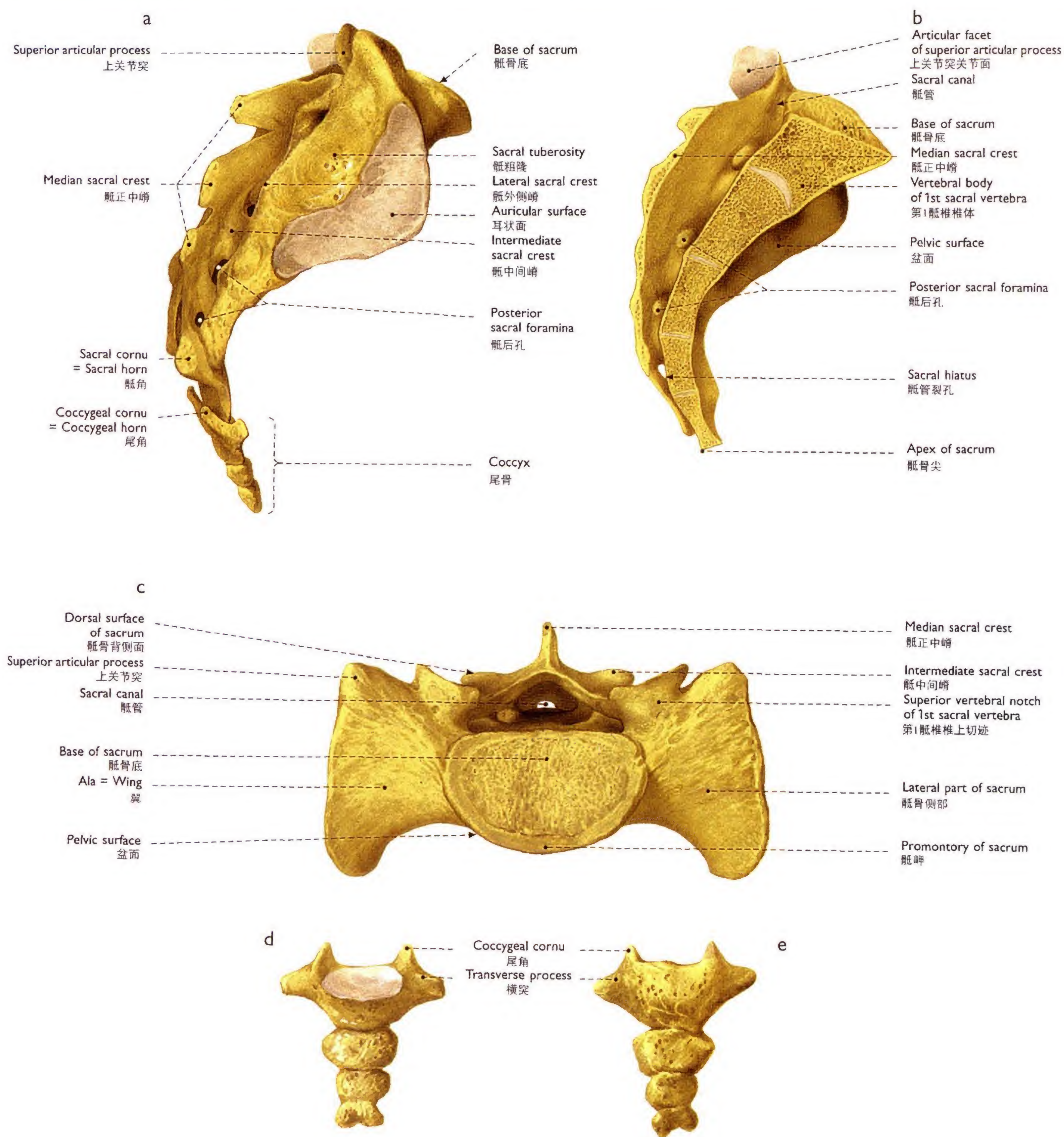
33 Middle lumbar vertebra (100%) 中段腰椎

- a Cranial aspect 上面观
- b Transverse computed tomogram (CT) CT横断层扫描图像
- c Dorsal aspect 后面观
- d Left lateral aspect 左侧面观



34 Sacrum and coccyx (80%) 骶骨和尾骨

- a Ventral aspect 前面观
b Dorsal aspect 后面观



35 Sacrum and coccyx 骶骨和尾骨

a-c Sacrum 骶骨

a Right lateral aspect (60%) 右侧面观

b Median section, medial aspect of the left half (60%) 正中矢状面、左侧半内侧面观

c Cranial aspect (70%) 上面观

d, e Coccyx (80%) 尾骨

d Ventral aspect 前面观

e Dorsal aspect 后面观



a

Dens axis
枢椎齿突

Lateral mass of atlas
寰椎侧块

Lateral atlanto-axial joint
寰枢外侧关节

Vertebral body of axis
枢椎椎体

Incisor teeth
切牙

Body of mandible
下颌体

第6颈椎
6th cervical vertebra
- Spinous process 棘突
- Vertebral body 椎体

第1颈椎 = 寰椎 [C1]
1st cervical vertebra
= Atlas [C1]
前弓 Anterior arch -
后弓 Posterior arch -

第1胸椎
1st thoracic vertebra
- Transverse process 横突
- Vertebral body 椎体

第2颈椎 = 枢椎 [C2]
2nd cervical vertebra
= Axis [C2]
齿突 Dens -
棘突 Spinous process -
椎体 Vertebral body -
下颌骨 Mandible

Inferior articular process
of 4th cervical vertebra
第4颈椎下关节突

Zygapophysial joint
关节突关节

Superior articular process
of 5th cervical vertebra
第5颈椎上关节突

Intervertebral disc
椎间盘

Intervertebral foramen
椎间孔

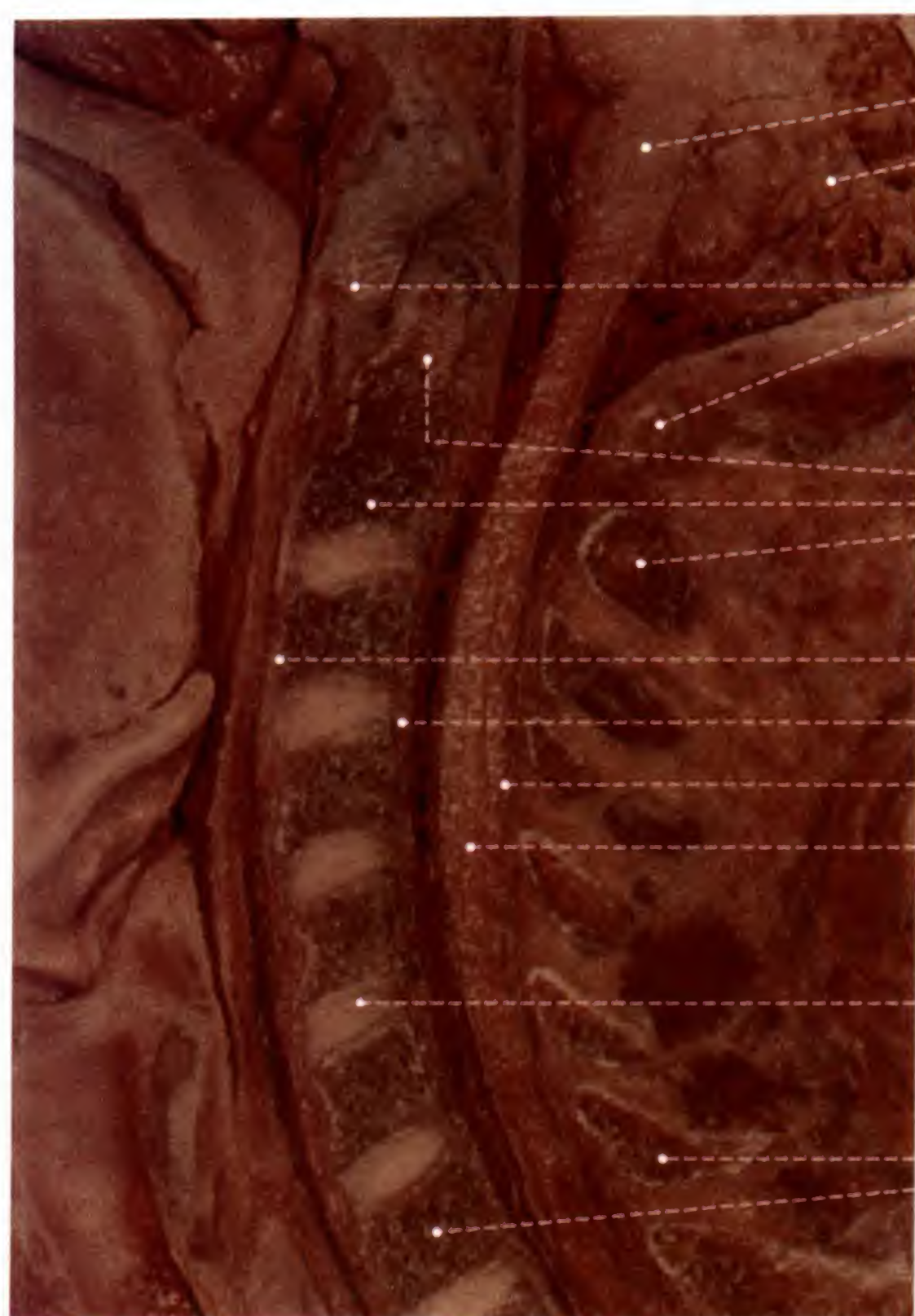
第7颈椎 7th cervical vertebra
棘突 Spinous process -
椎体 Vertebral body -



36 Cervical spine (100%) 脊柱颈段

a Anteroposterior radiograph 前后位X线图像

b Lateral radiograph 侧位X线图像



a

Medulla oblongata 延髓

Cerebellum 小脑

1st cervical vertebra = Atlas [C I] 第1颈椎=寰椎[C I]

- Anterior arch 前弓
- Posterior arch 后弓

2nd cervical vertebra = Axis [C II] 第2颈椎=枢椎[C II]

- Dens 齿突
- Vertebral body 椎体
- Spinous process 棘突

Anterior longitudinal ligament 前纵韧带

Posterior longitudinal ligament 后纵韧带

Ligamentum flavum 黄韧带

Spinal cord 脊髓

Intervertebral disc 椎间盘

7th cervical vertebra 第7颈椎

= Vertebra prominens 隆椎

- Spinous process 棘突
- Vertebral body 椎体

b

Basilar part of occipital bone 枕骨基底部

Medulla oblongata 延髓

Squamous part of occipital bone 枕骨鳞部

第1颈椎=寰椎[C I] 1st cervical vertebra = Atlas [C I]

前弓 Anterior arch -
后弓 Posterior arch -

第2颈椎=枢椎[C II] 2nd cervical vertebra = Axis [C II]

齿突 Dens -
椎体 Vertebral body -
棘突 Spinous process -

Anterior longitudinal ligament 前纵韧带

Posterior longitudinal ligament 后纵韧带

Intervertebral disc 椎间盘

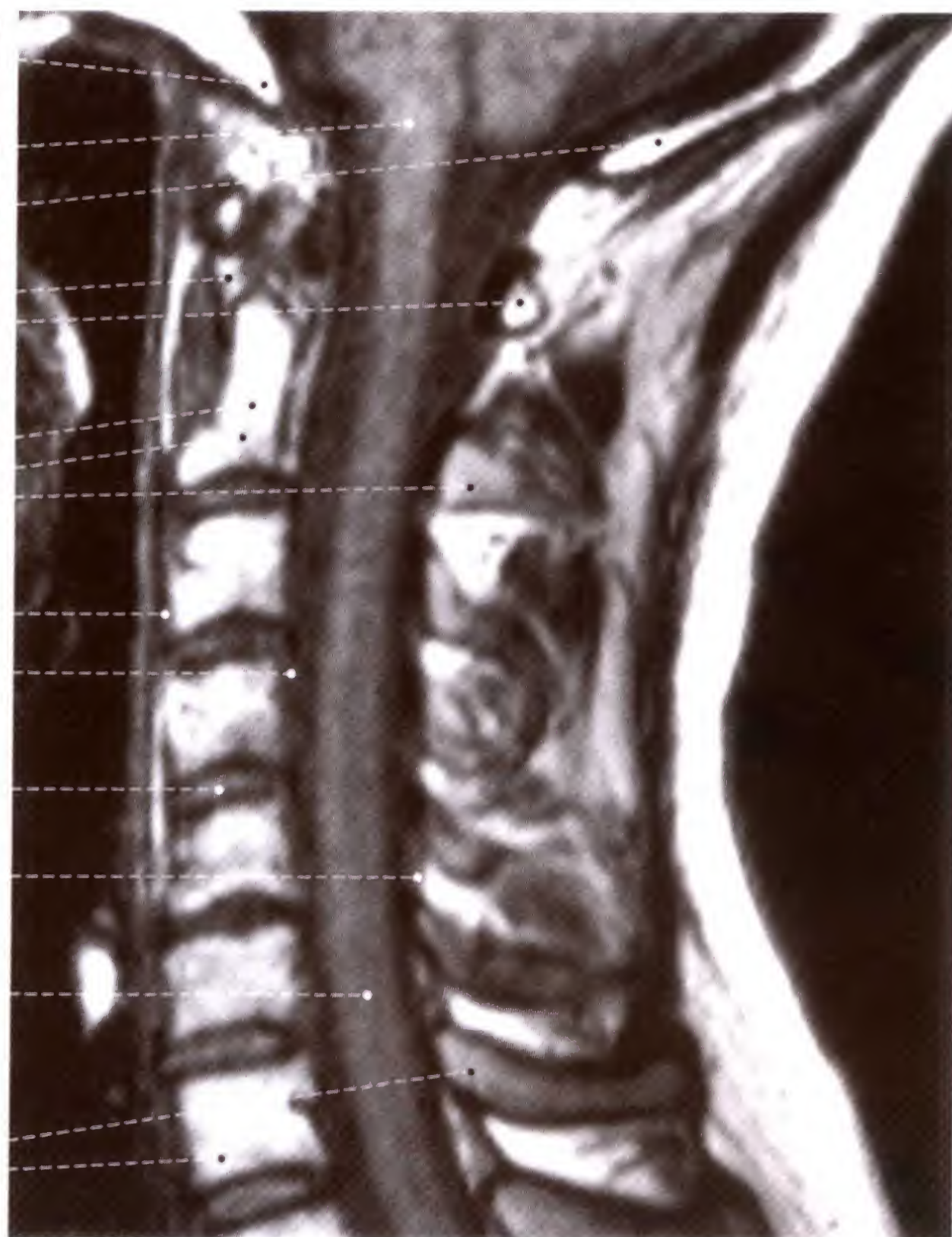
Ligamentum flavum 黄韧带

Spinal cord 脊髓

第7颈椎 7th cervical vertebra

隆椎 = Vertebra prominens

棘突 Spinous process -
椎体 Vertebral body -

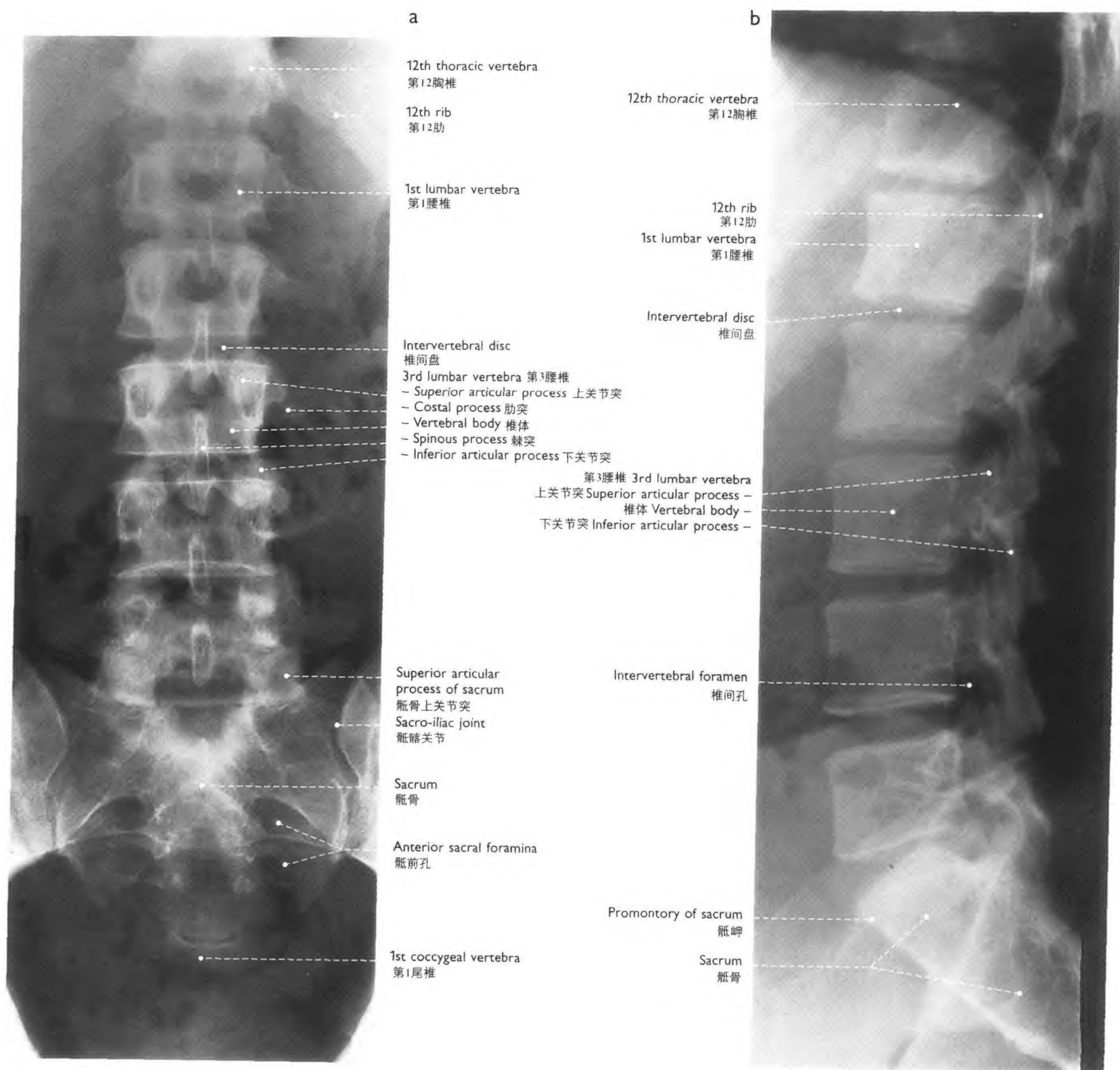


37 Cervical spine (90%) 脊柱颈段

Midsagittal section 正中矢状切面

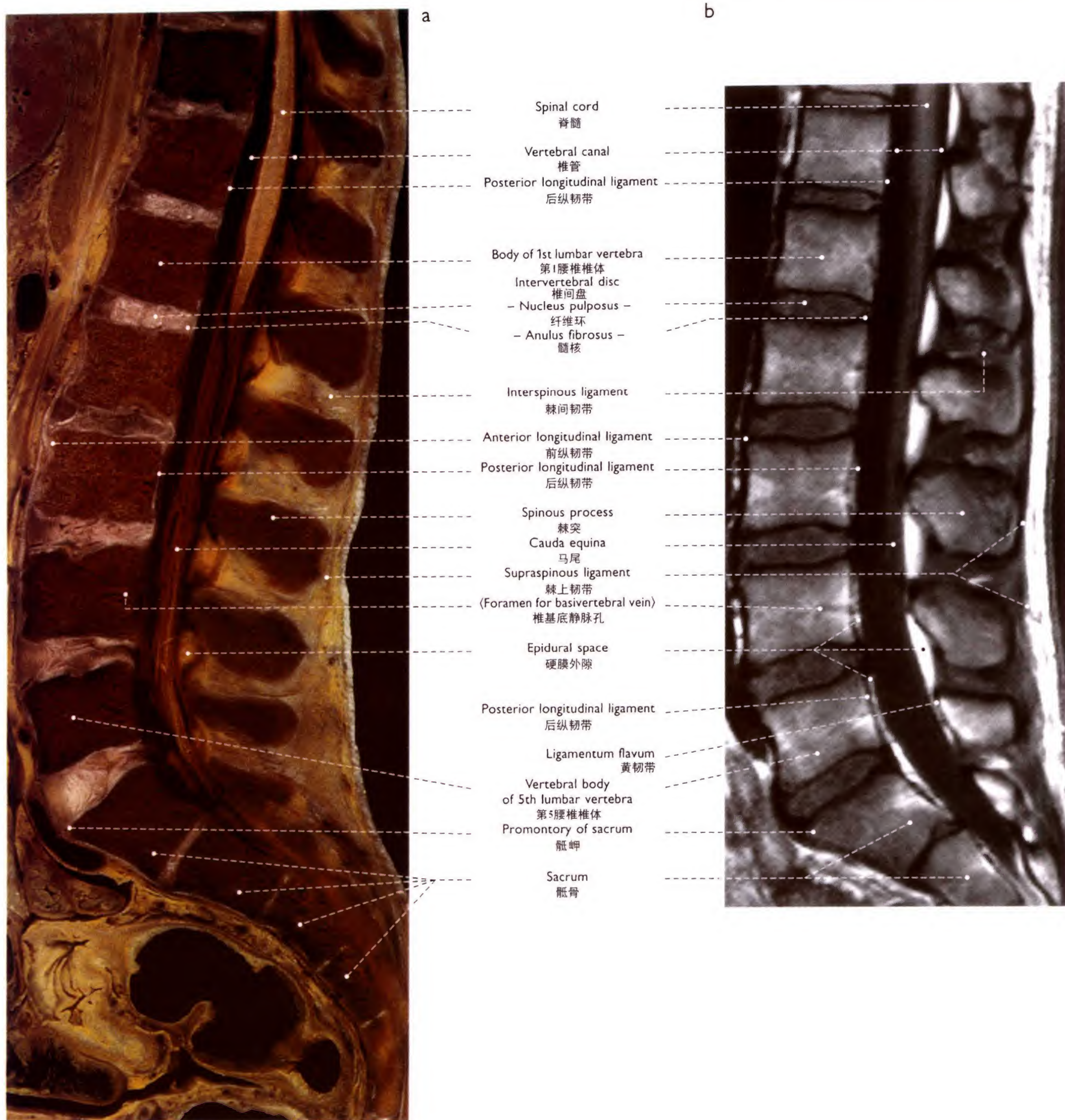
a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)



38 Lumbar spine, sacrum, and coccyx (50%) 腰段脊柱、骶骨和尾骨

- a Anteroposterior radiograph 前后位X线图像
b Lateral radiograph 侧位X线图像

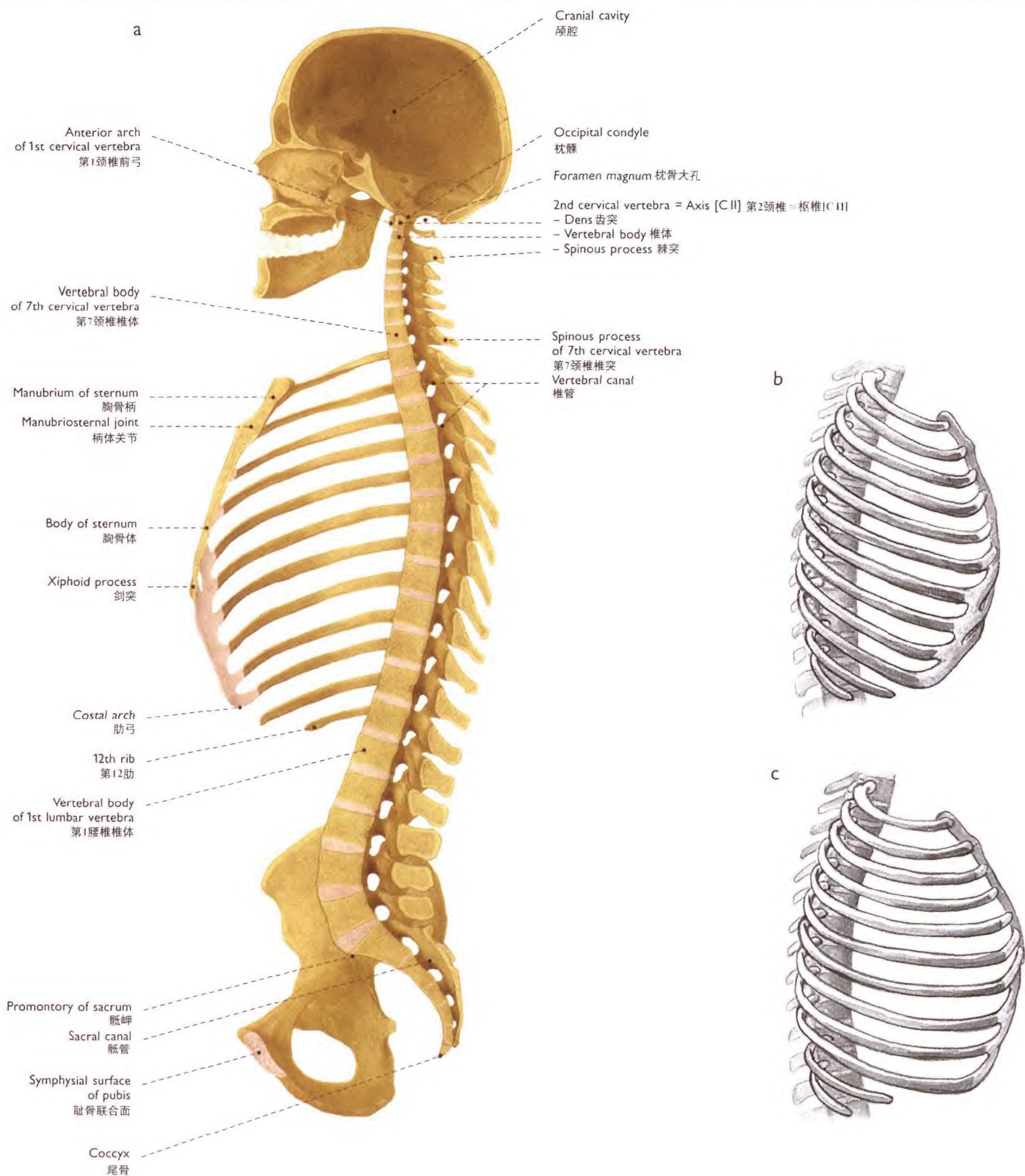


39 Lumbar spine, sacrum, and coccyx (50%) 腰段脊柱、骶骨和尾骨

Midsagittal section 正中矢状切面

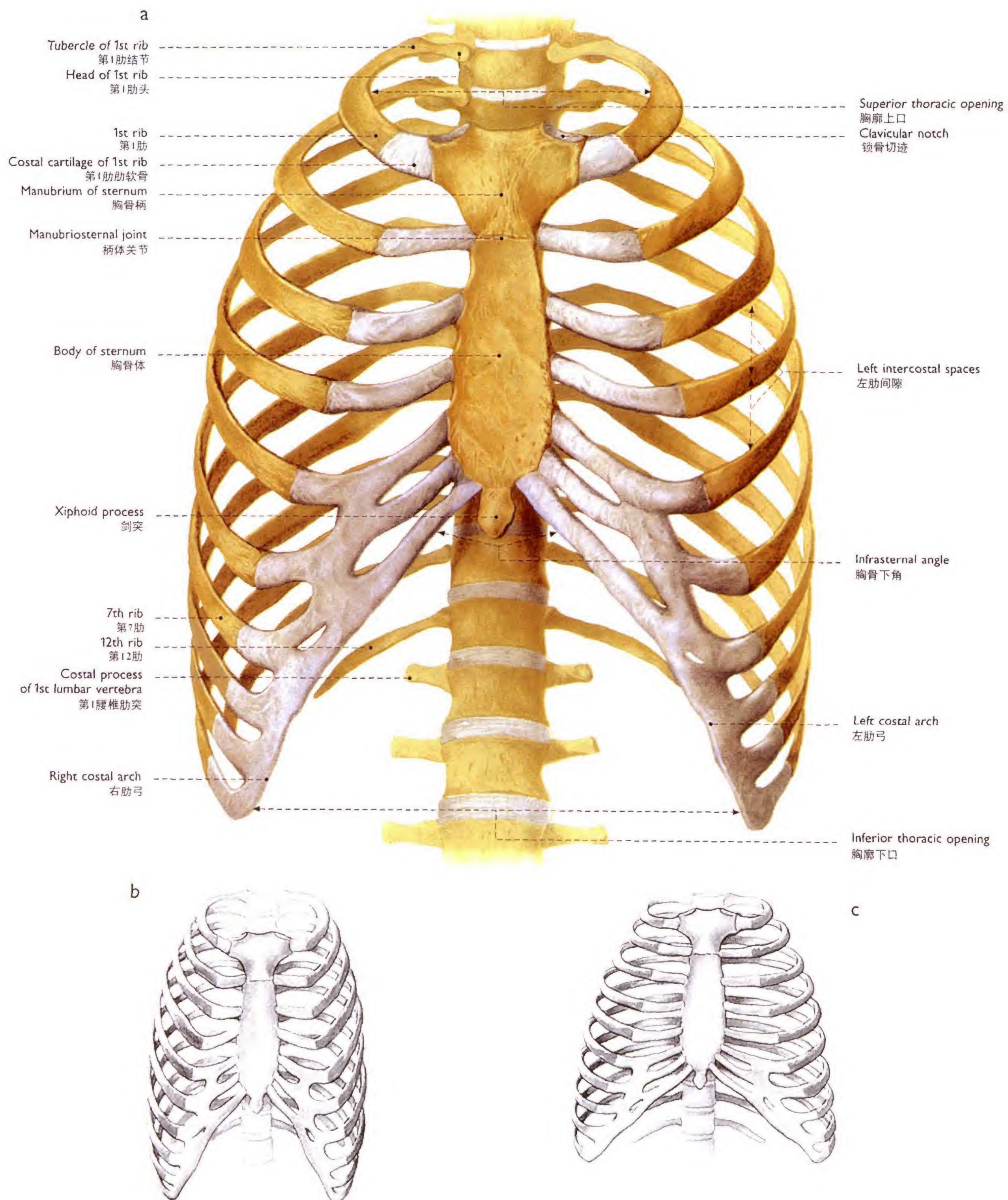
a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)



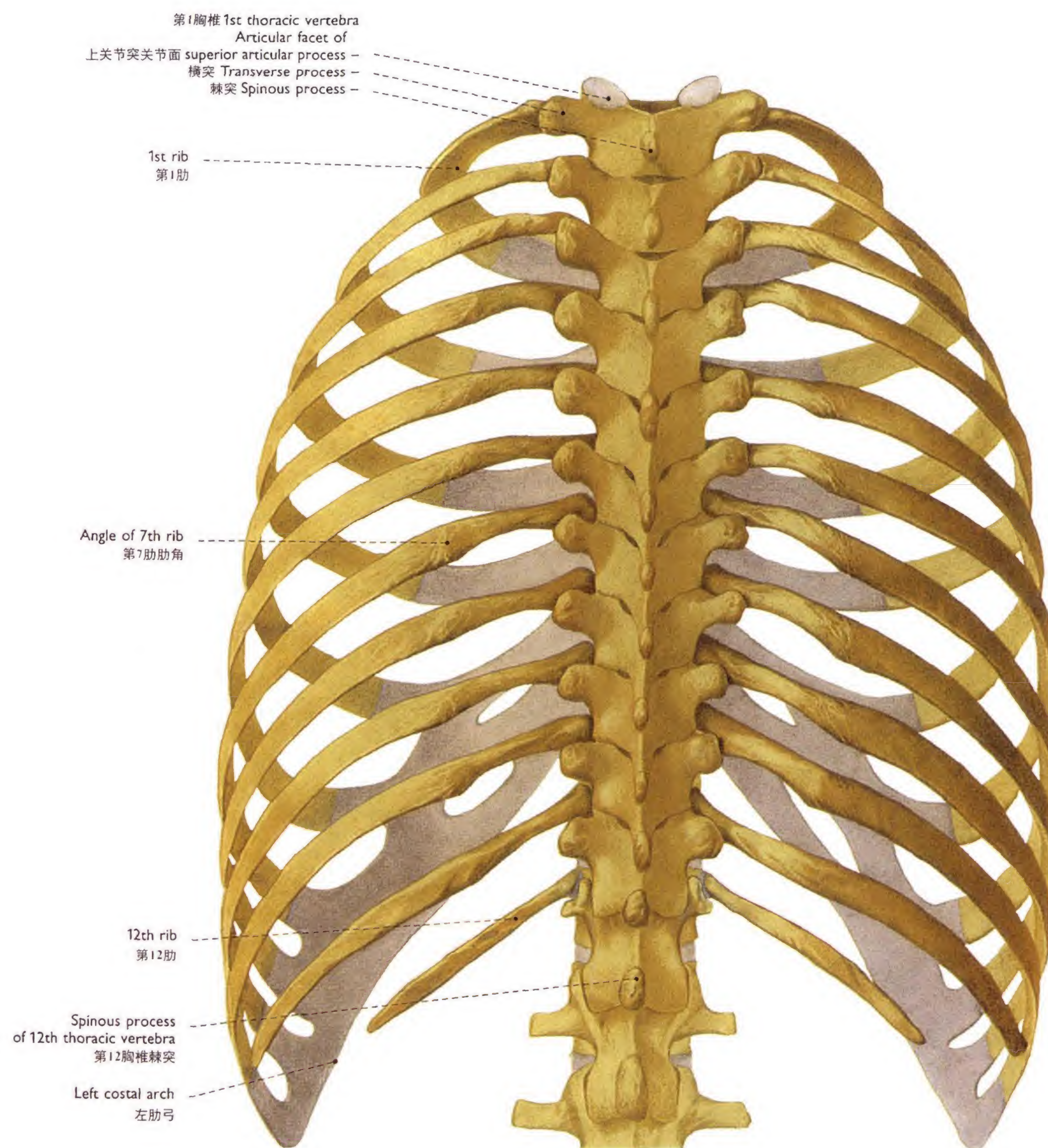
40 Skeleton of the trunk and hip bone 躯干骨和髋骨

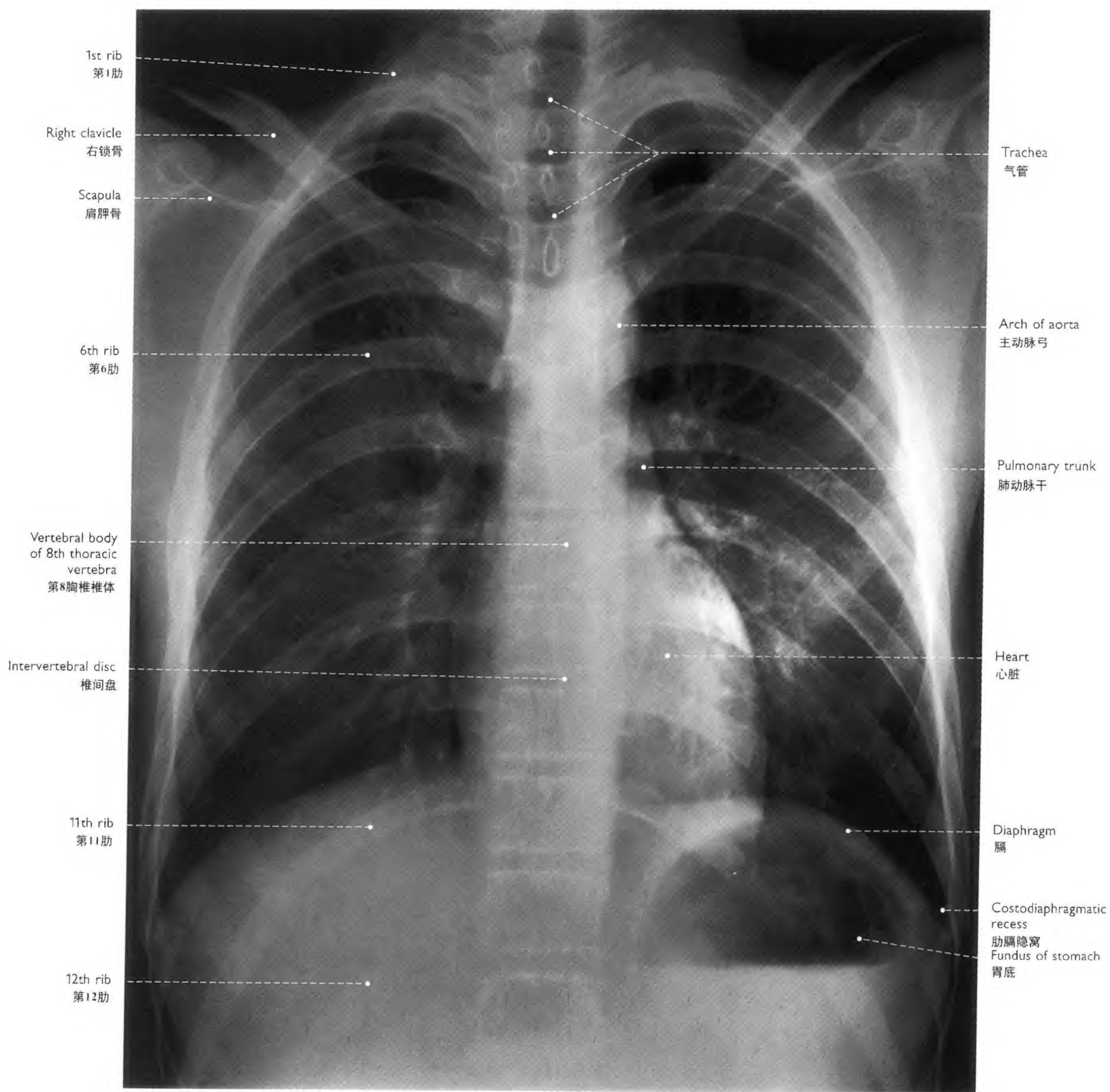
- a Median section (25%), medial aspect 正中切面, 内侧面观
- b, c Alterations of the shape of thorax during respiration, right lateral aspect 呼吸动态胸廓形态变化, 右侧面观
- b Phase of expiration 呼气阶段
- c Phase of inspiration 吸气阶段



41 Thorax 胸廓

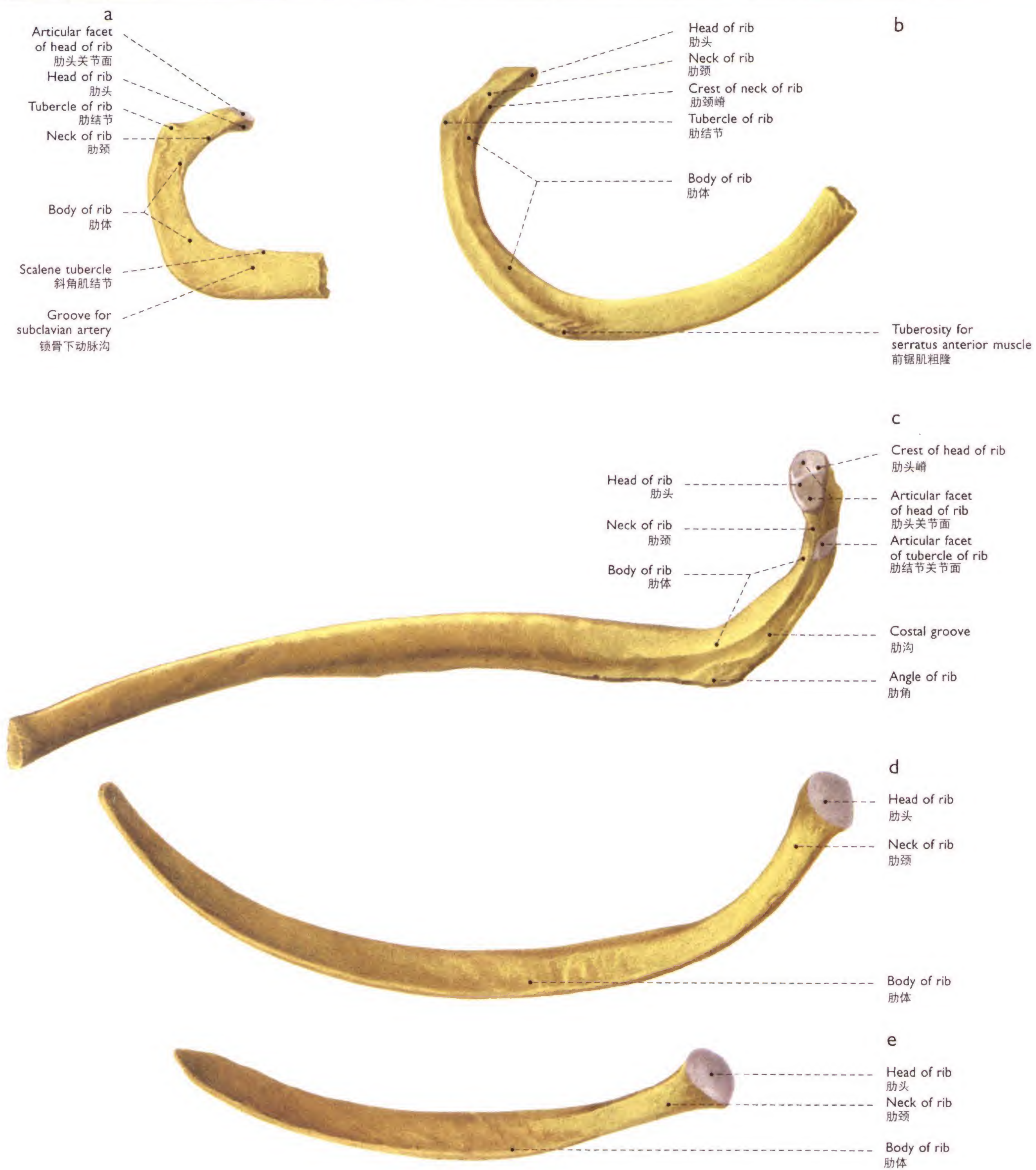
- a Ventral aspect (45%) 前面观
- b, c Alterations of the shape of thorax during respiration, ventral aspect 呼吸动态胸廓形态变化, 前面观
- b Phase of expiration 呼气阶段
- c Phase of inspiration 吸气阶段





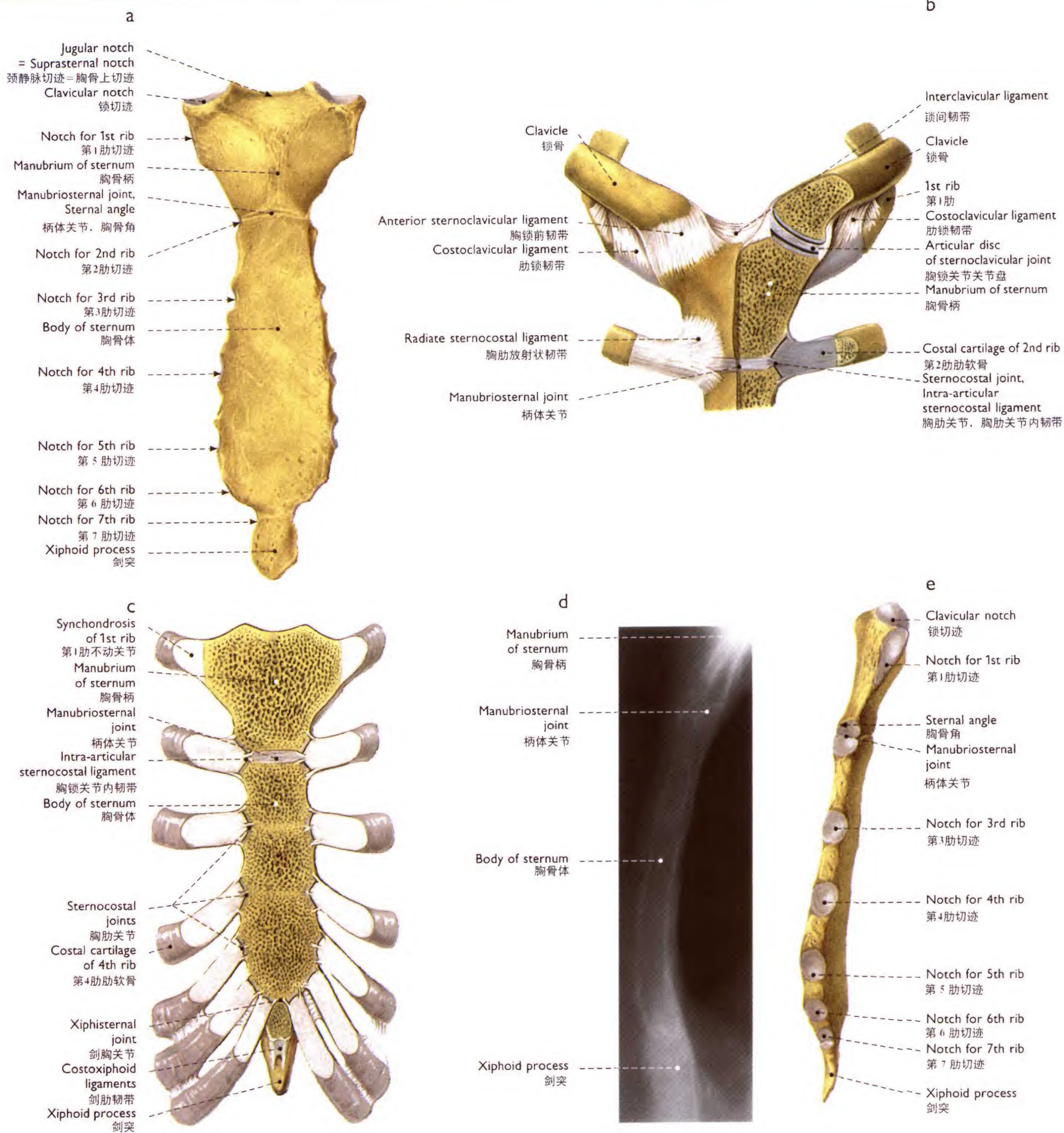
43 Thorax (50%) 胸廓

Postero-anterior radiograph of the thorax and 胸廓和肩带的后前位X线图像
the pectoral girdle. The arms are elevated. 臂部上提



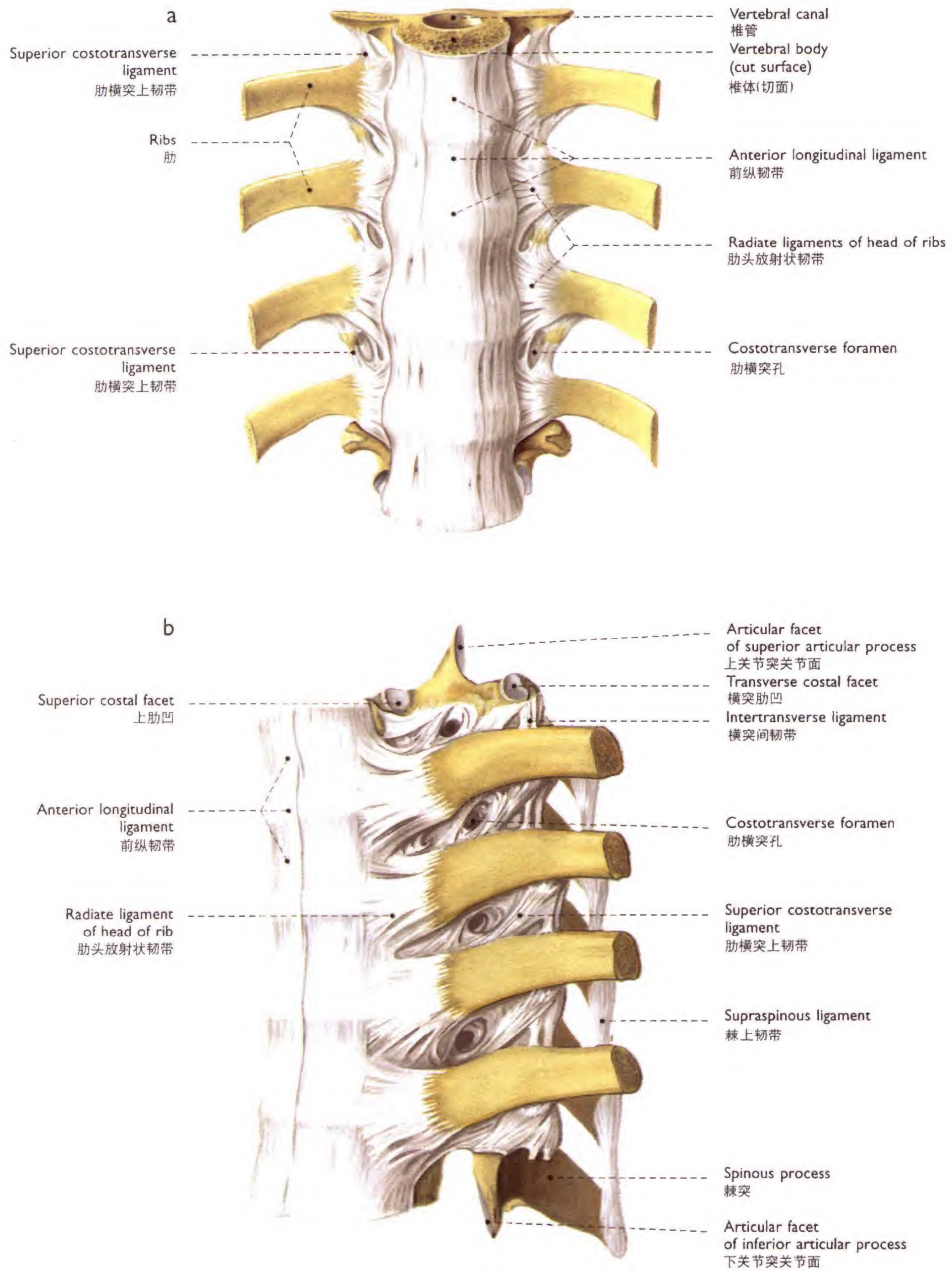
44 (Bony) ribs (65%) 肋

- a, b Cranial aspect 上面观
 a 1st left rib 左第1肋
 b 2nd left rib 左第2肋
 c-e Inner surface 内面观
 c 8th left rib 左第8肋
 d 11th left rib 左第11肋
 e 12th left rib 左第12肋



45 Sternum and joints 胸骨及连结

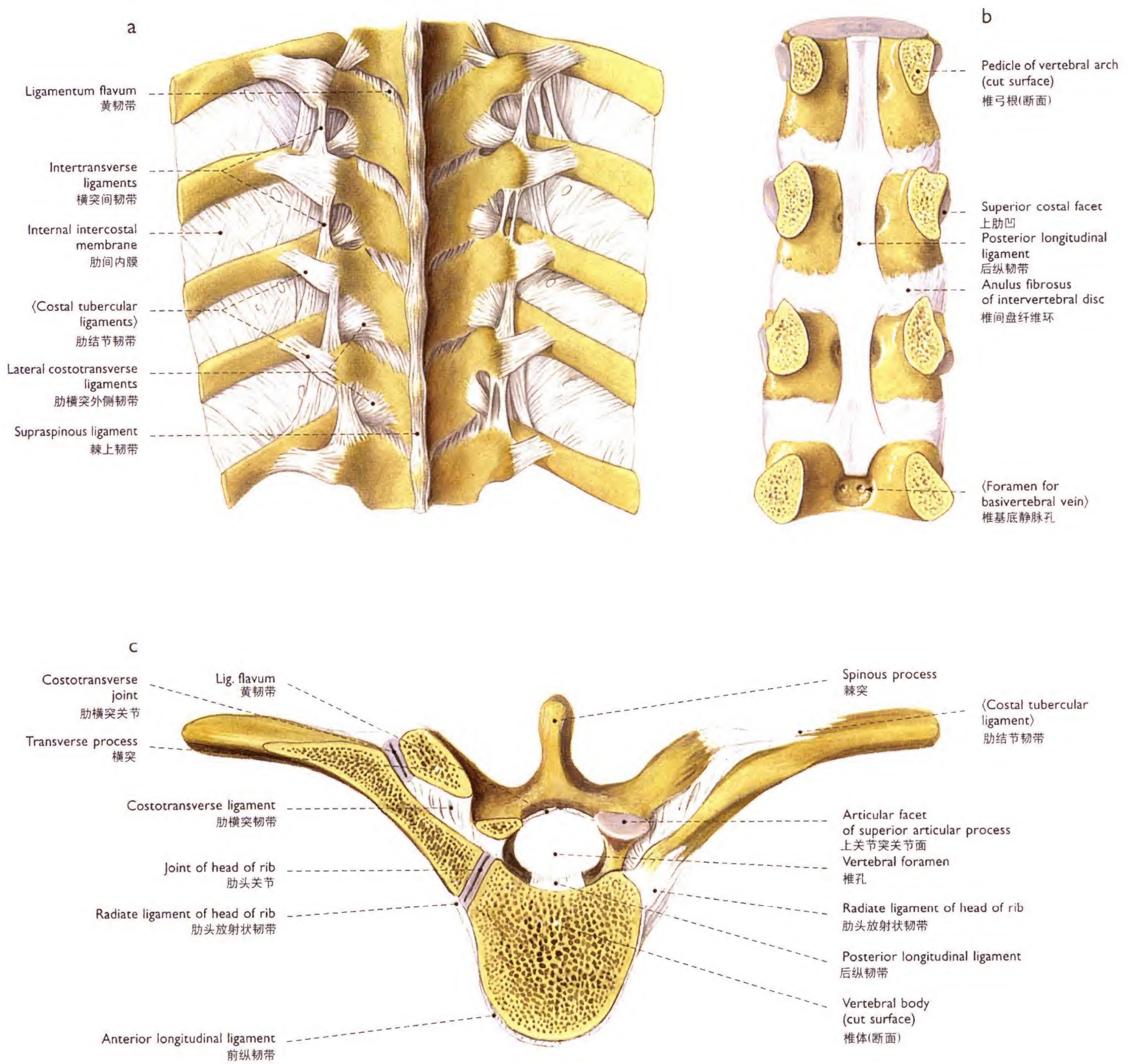
- a Sternum (45%), ventral aspect 胸骨, 前面观
- b Sternoclavicular joint (70%), ventral aspect. 胸锁关节, 前面观
The sternoclavicular and sternocostal joints were exposed on the left side of the body by a frontal section. 胸锁关节和胸肋关节均暴露于左侧, 冠状切面
- c Sternocostal joints (45%), exposed by a frontal section, ventral aspect 冠状切面暴露, 胸肋关节, 前面观
- d, e Sternum (50%) 胸骨
- d Lateral radiograph 侧位X线图像
- e Left lateral aspect 左侧面观



46 Costovertebral joints 肋椎关节

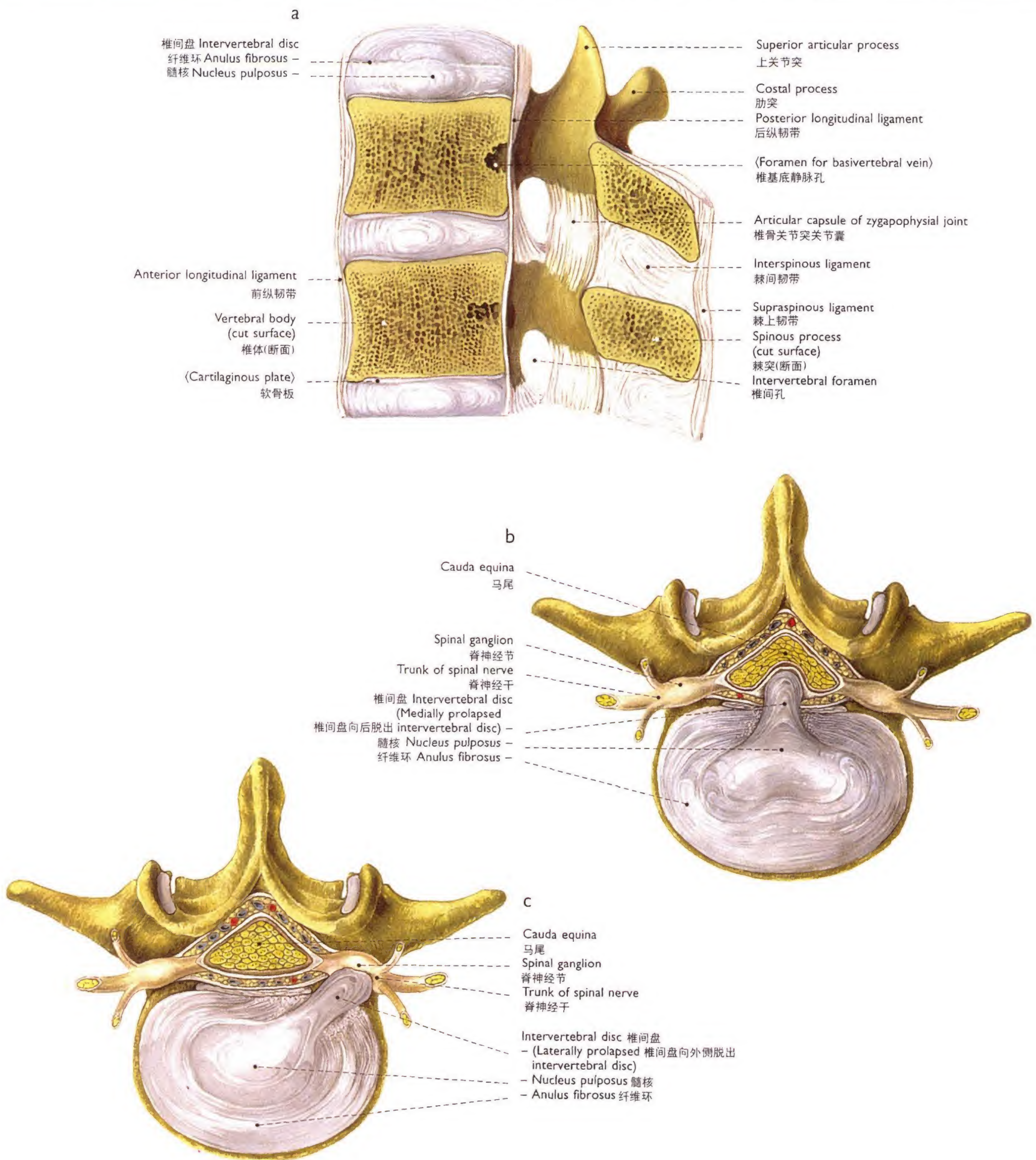
a Ventral aspect (60%) 前面观

b Left lateral aspect (70%) 左侧面观



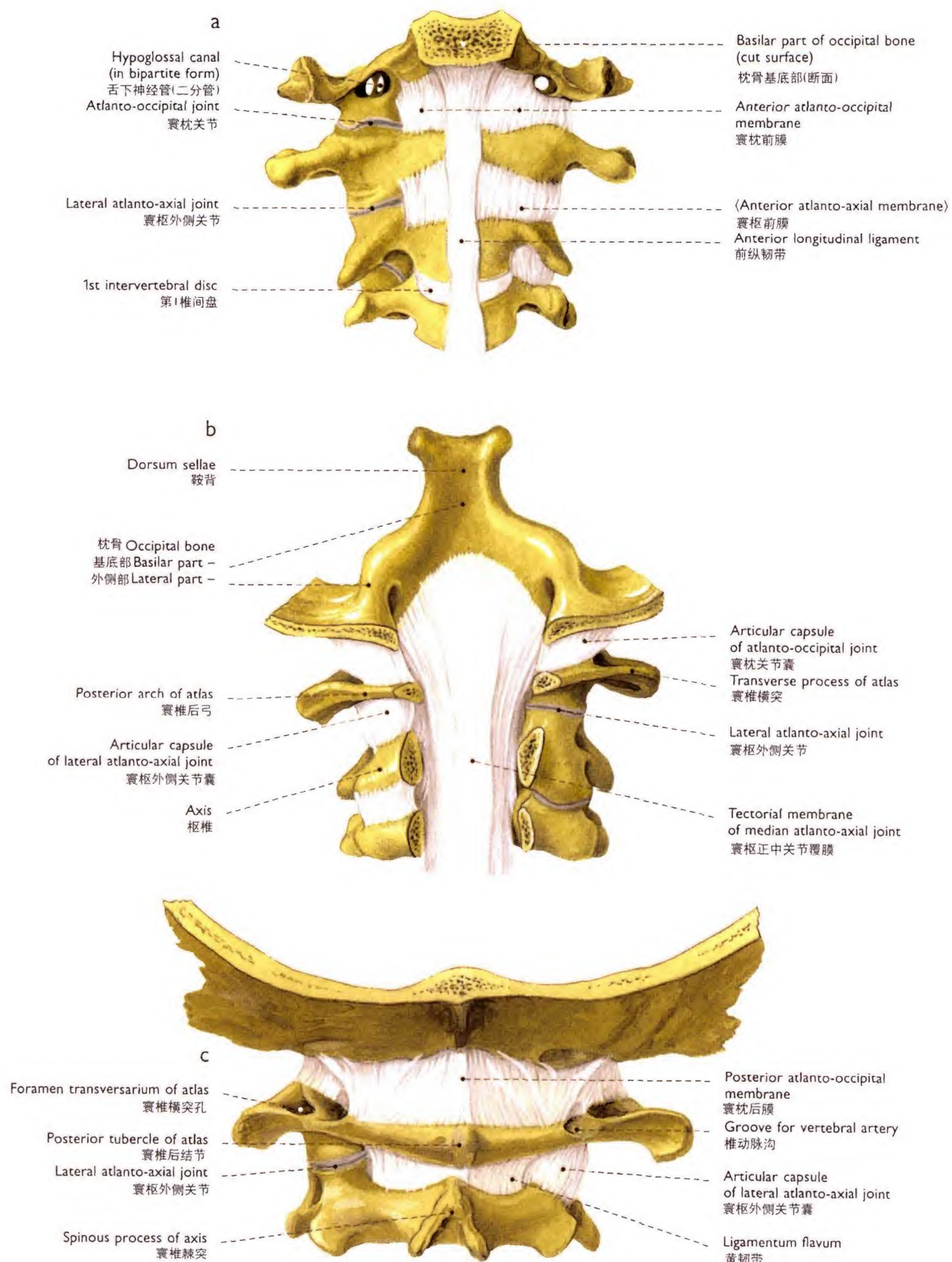
47 Thoracic spine and costovertebral joints 胸段脊柱和肋椎关节

- a Costovertebral joints (60%), dorsal aspect 肋椎关节、后面观
- b Thoracic spine (70%), dorsal aspect of the ventral wall of the vertebral canal after removal of the vertebral arches 胸段脊椎、去除椎弓后椎管前壁后面观
- c Middle thoracic vertebra and its ribs (100%), oblique section, cranial aspect 中段胸椎和肋、斜切面、上面观



48 Intervertebral disc 椎间盘

- a Middle lumbar vertebrae with intervertebral discs (80%),
median section, medial aspect 带椎间盘的中段腰椎正中矢状切面, 内侧面观
- b, c Lower lumbar vertebra with intervertebral disc,
cauda equina and spinal nerves (100%), cranial aspect 带椎间盘, 马尾和脊神经的低位腰椎, 上面观
- b Medial prolapse of the disc 椎间盘向后脱出
- c Lateral prolapse of the disc 椎间盘向外侧脱出



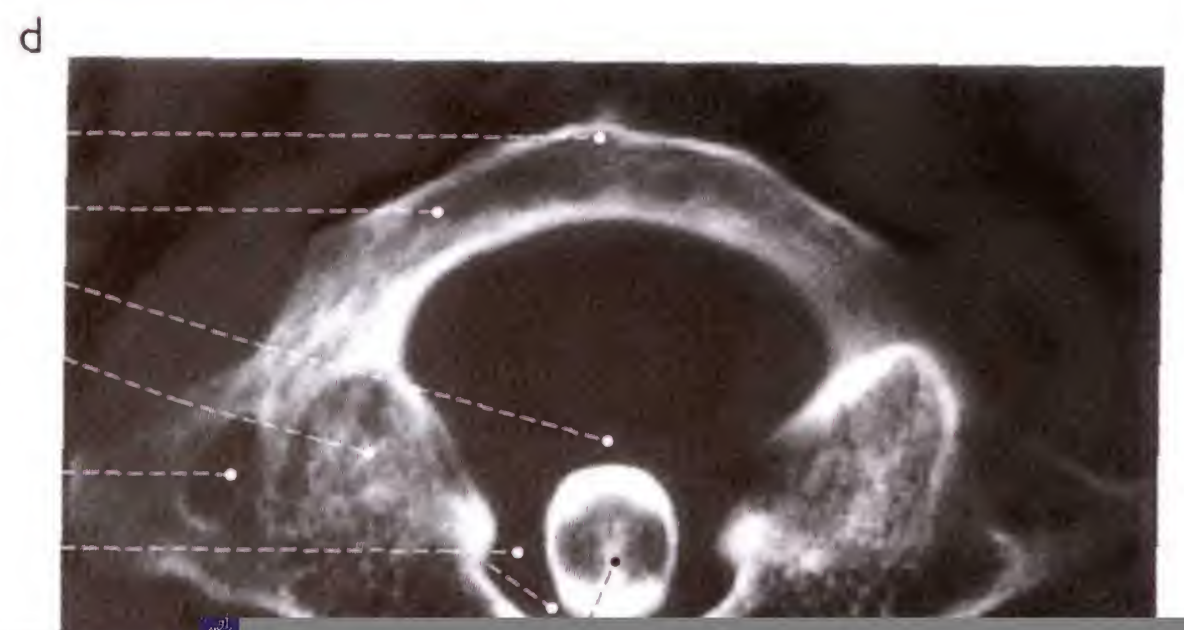
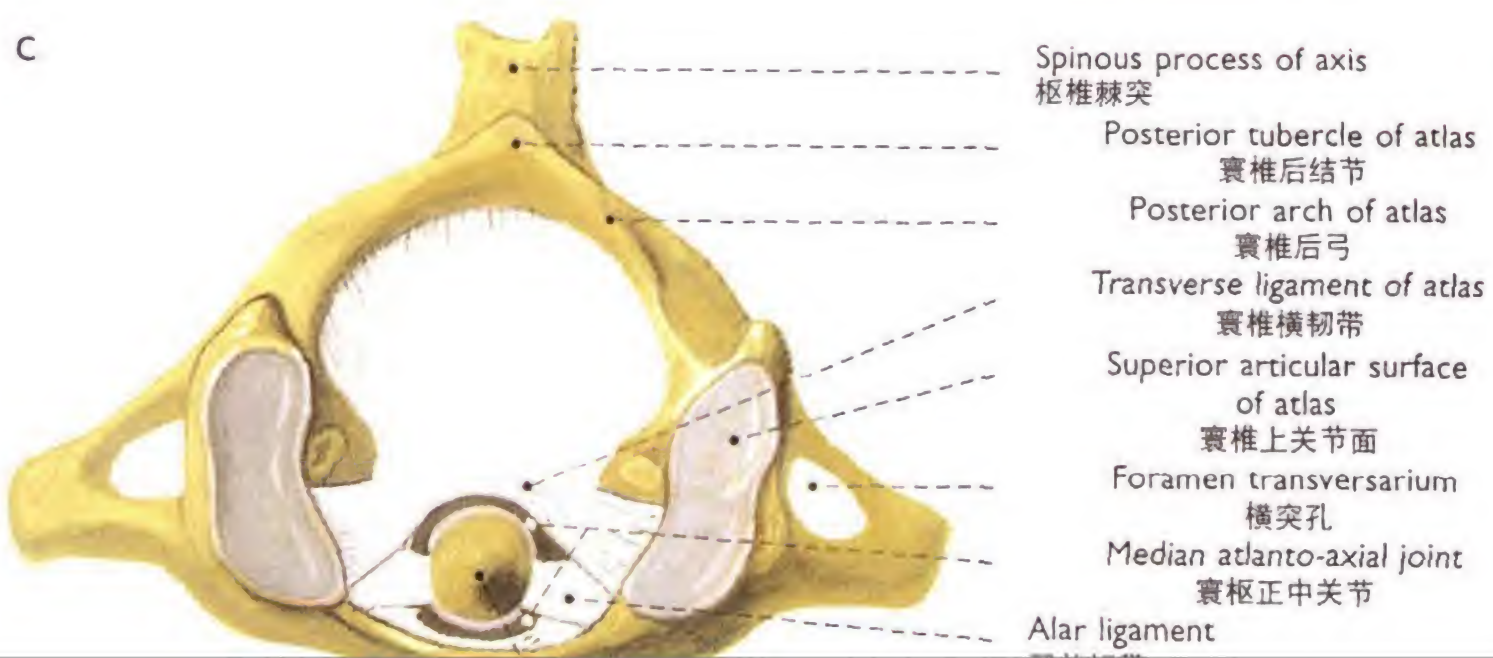
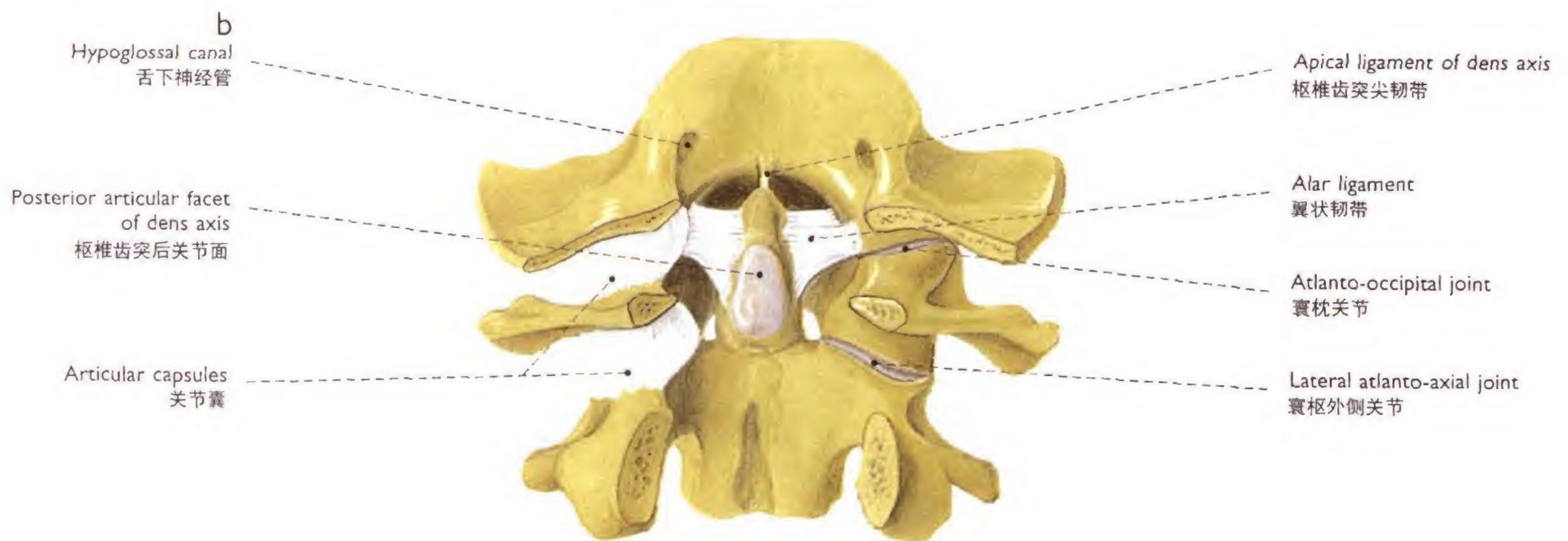
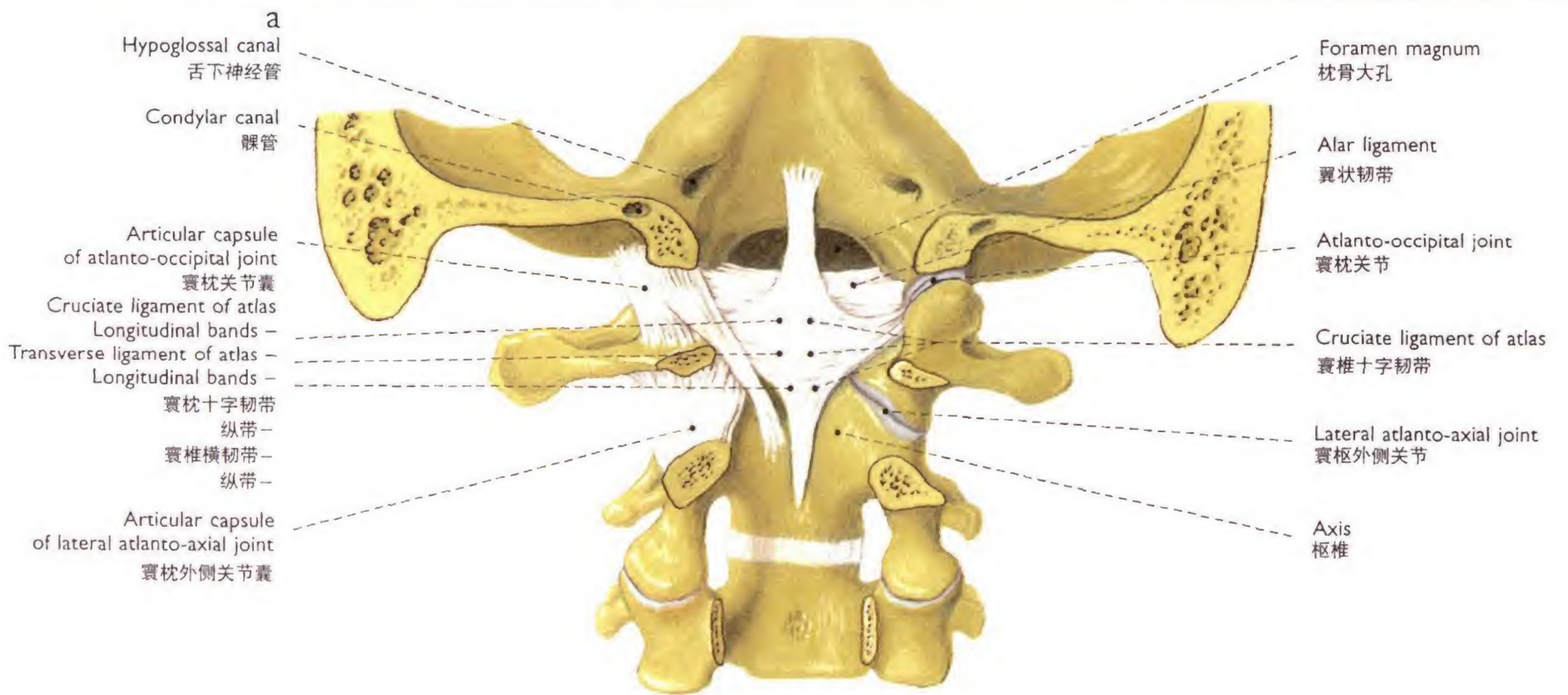
49 Atlanto-occipital and atlanto-axial joints 寰枕关节和寰枢关节

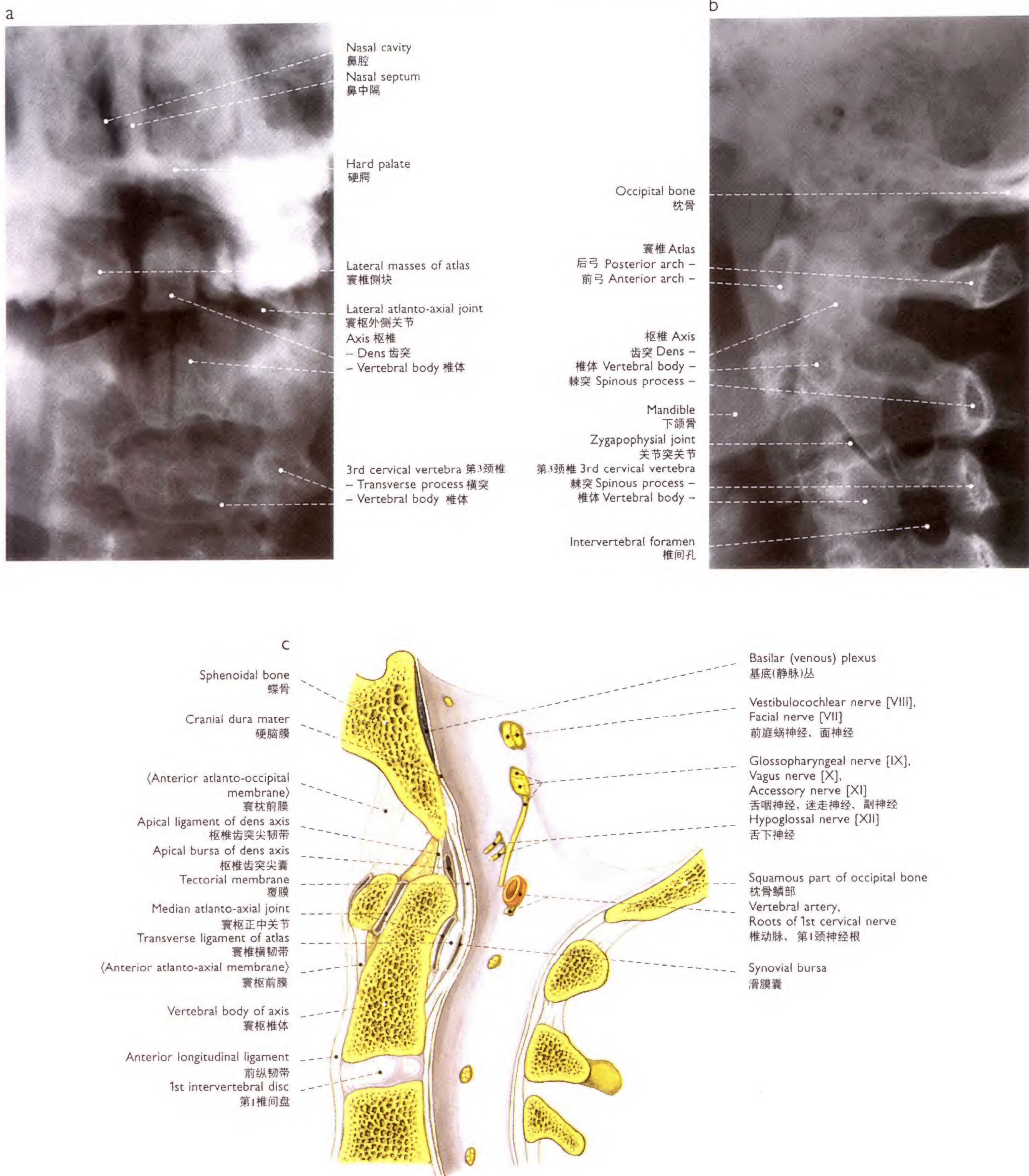
a Ventral aspect (90%) 前面观

b Dorsal aspect (90%) after removal of the posterior part of the occipital bone and the arches of the upper cervical vertebrae.

The vertebral canal was opened. 去除枕骨后份和颈椎上部椎弓后面观, 椎孔打开

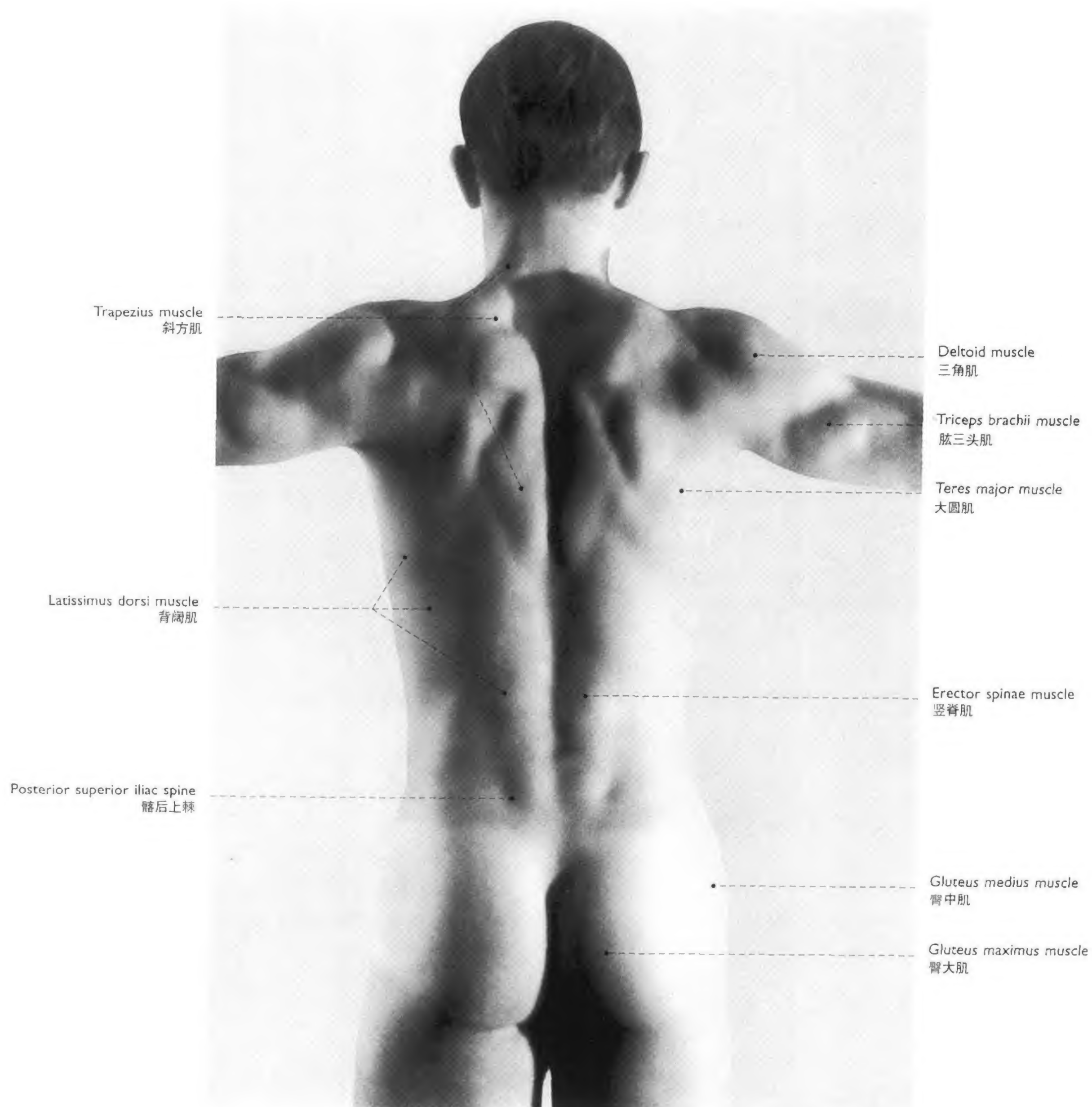
c Dorsal aspect with remaining vertebral arches (110%) 保留椎弓后面观



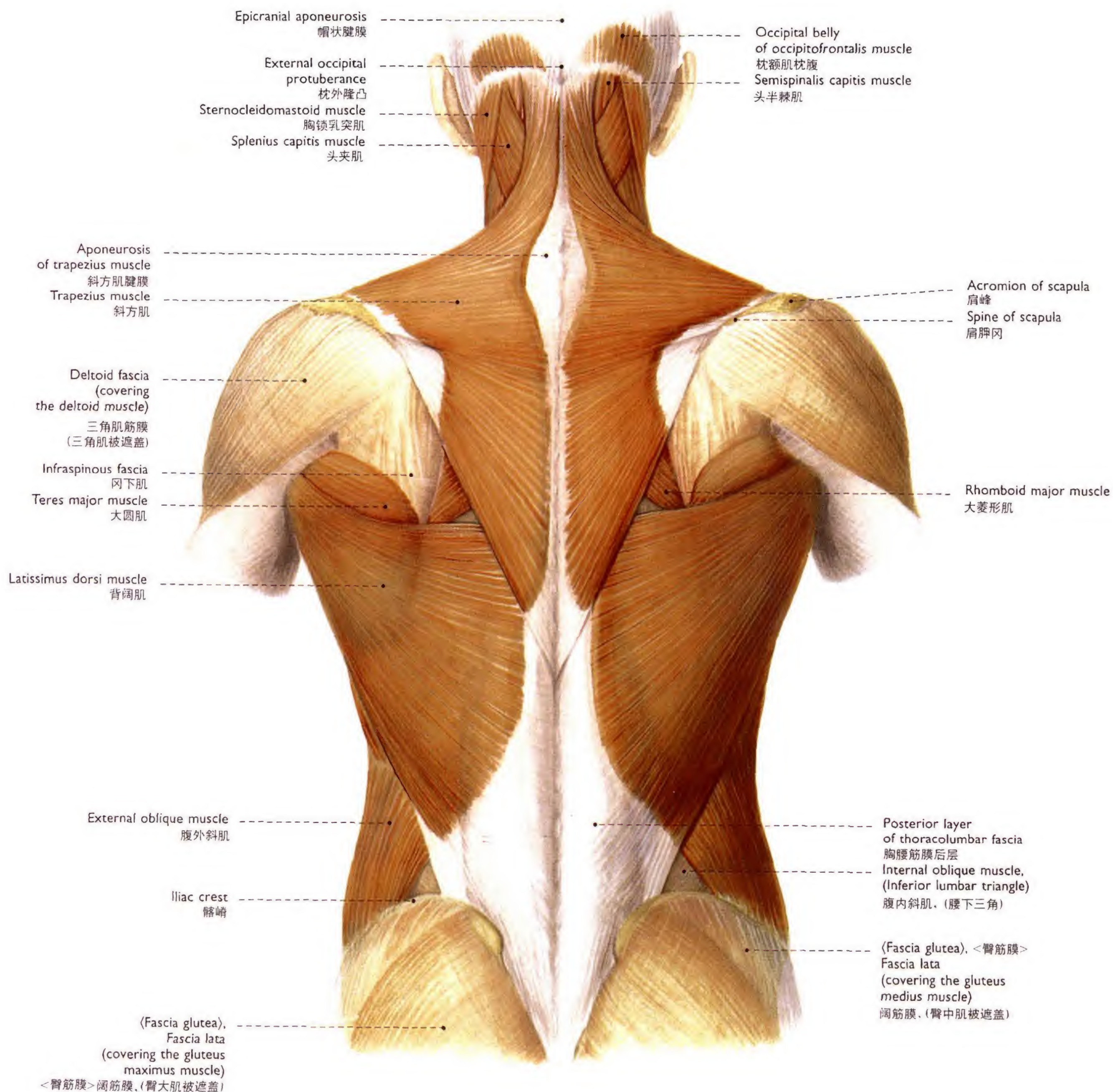


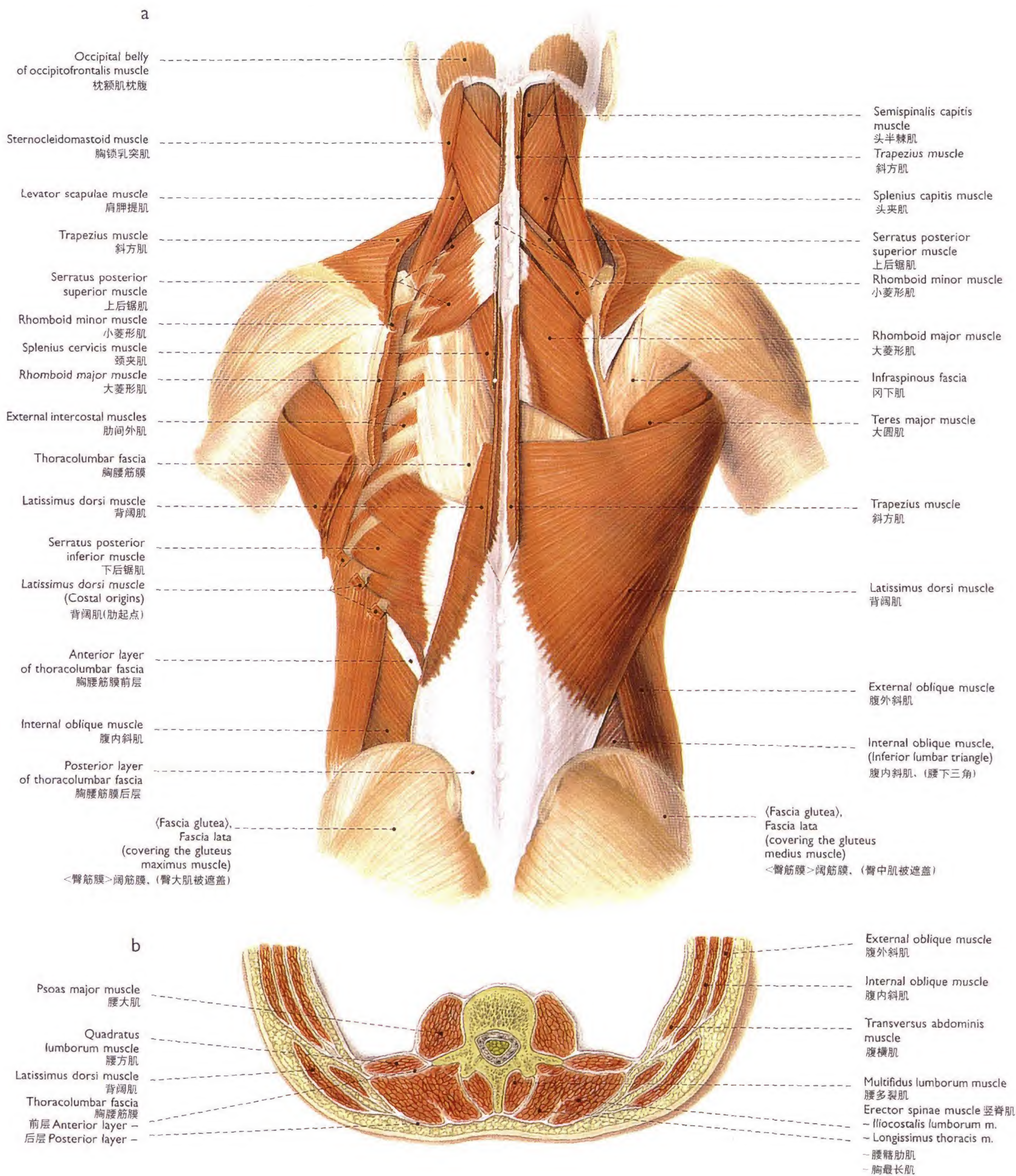
51 Median atlanto-axial joint 寰枢正中关节

- Anteroposterior radiograph of the upper cervical spine (mouth opened) (70%) 上颈段脊柱前后位X线图像(张口)
- Lateral radiograph of the upper cervical spine (70%) 上颈段脊柱侧位X线图像
- Medial aspect of a median section through the occipital bone and the first cervical vertebrae (90%) 经枕骨和第1颈椎正中矢状切面、内侧面观



52 Surface anatomy of the back of a male (20%) 男性背部表面解剖
Dorsal aspect 后面观

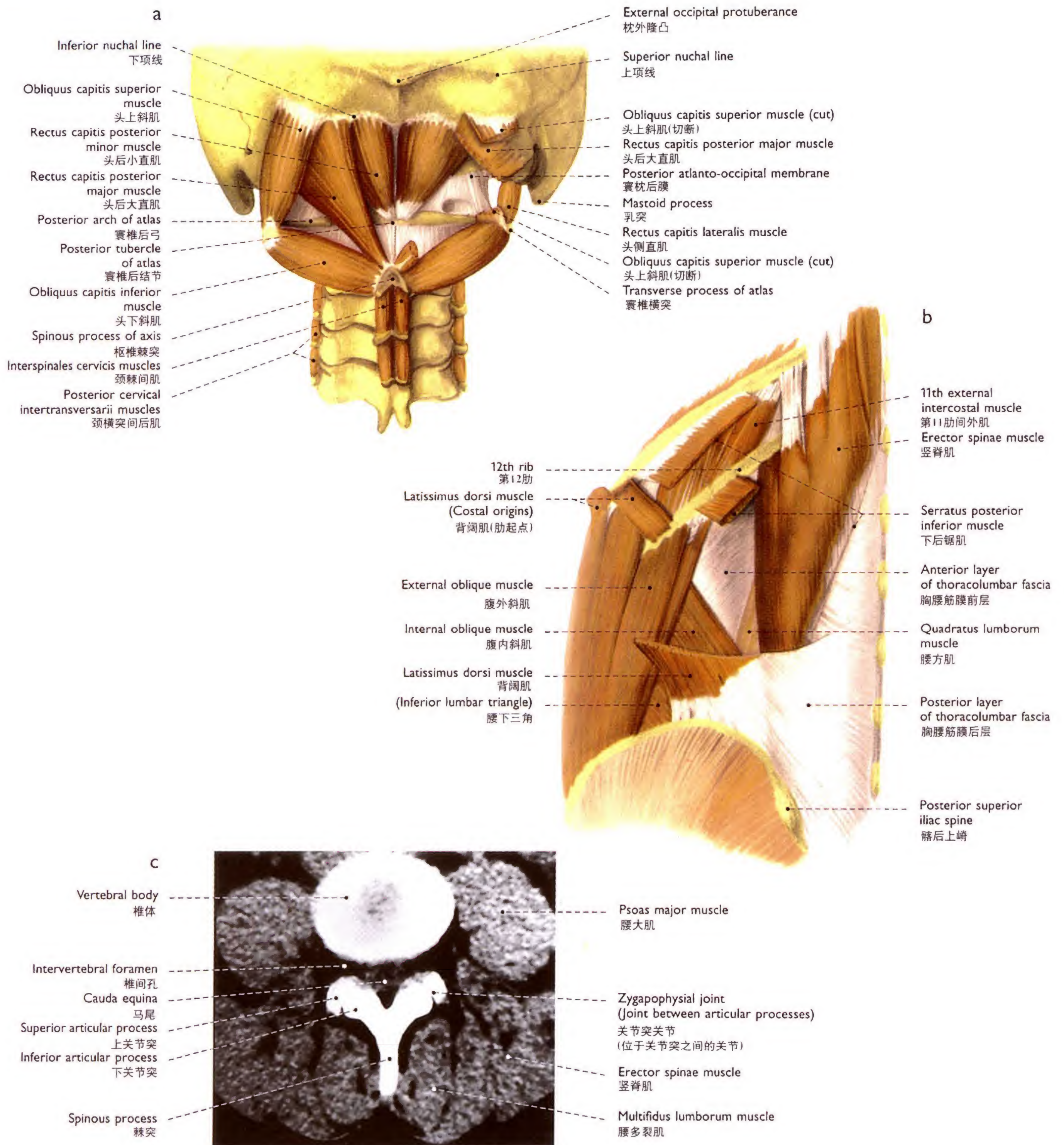




54 Muscles of the back 背肌

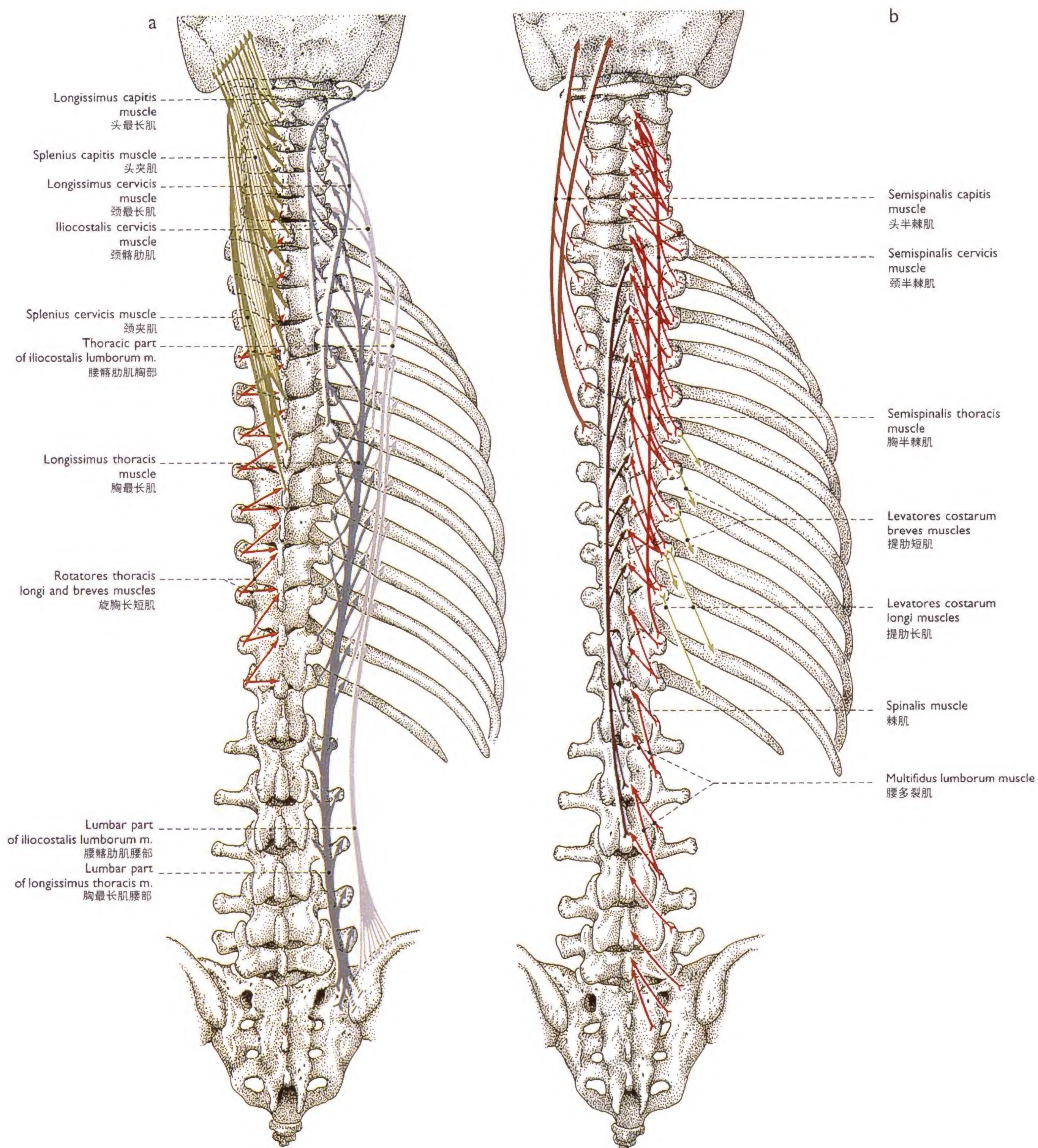
a Deeper layer (25%) 深层

b Schematized transverse section through the posterior and lateral abdominal wall in the lumbar region (35%) 腰区经腹后外侧壁横断面示意图



55 Deep muscles of the neck and muscles of the lumbar region 颈深层肌和腰区肌肉

- a Deep muscles of the neck (50%), dorsal aspect 颈深层肌, 后面观
- b Muscles of the lumbar region (40%), left dorsolateral aspect. 腰区肌肉, 左后外侧
The latissimus dorsi and serratus posterior inferior muscles were partially removed. 面观, 背阔肌和下后锯肌被部分切除
- c Transverse computed tomogram (CT) of the fifth lumbar vertebra with adjacent muscles (40%) 第5腰椎及邻近肌肉的CT图像

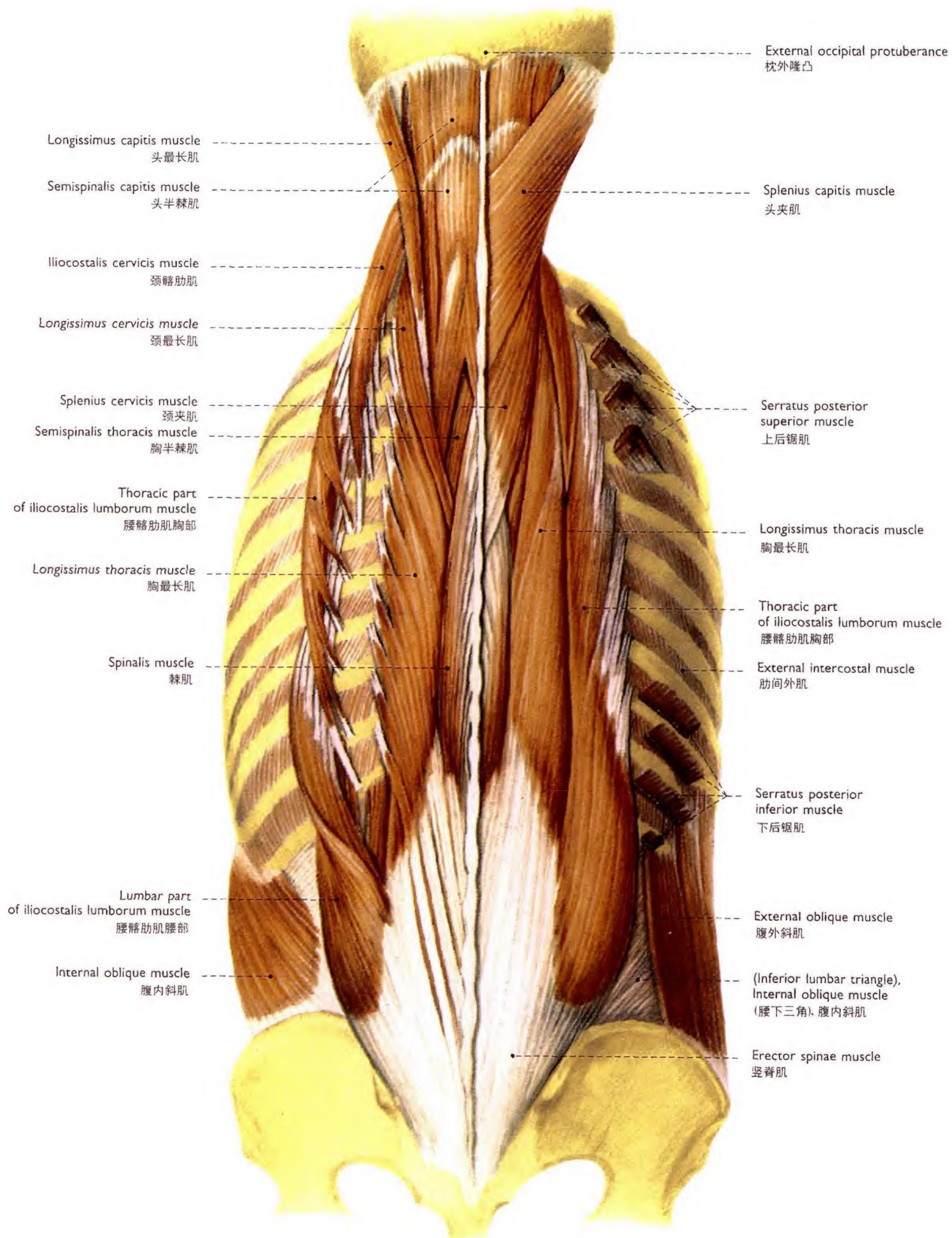


56 Muscles of the back proper (30%) 背固有肌

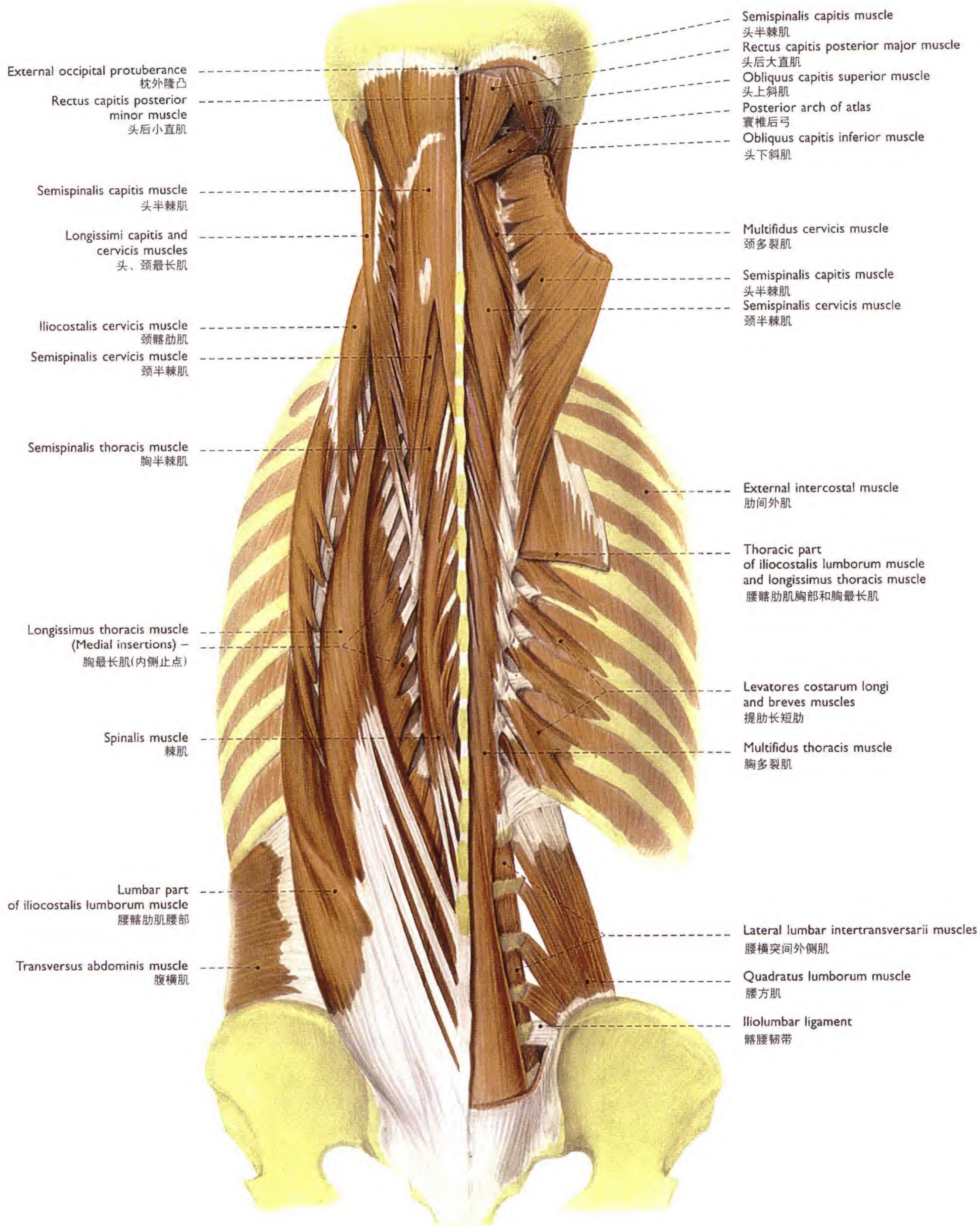
Schematic course 示意图

The muscles of the medial tract of the erector spinae are colored in red to brown, the muscles of the lateral tract in blue,

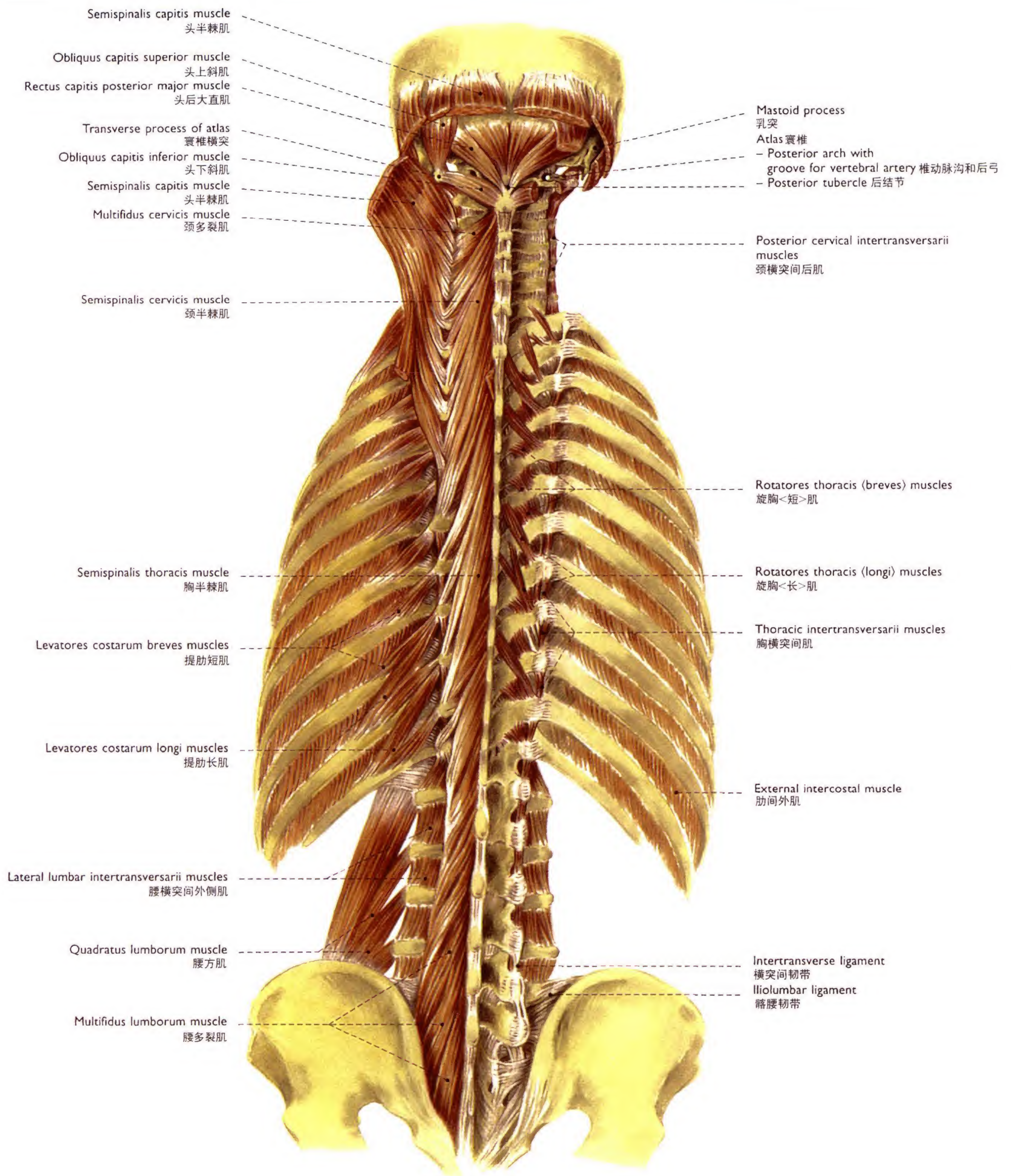
the splenii and levatores costarum muscles are given in green. 褐色表示竖棘肌内侧束, 蓝色表示外侧束, 绿色表示半棘肌和提肋肌



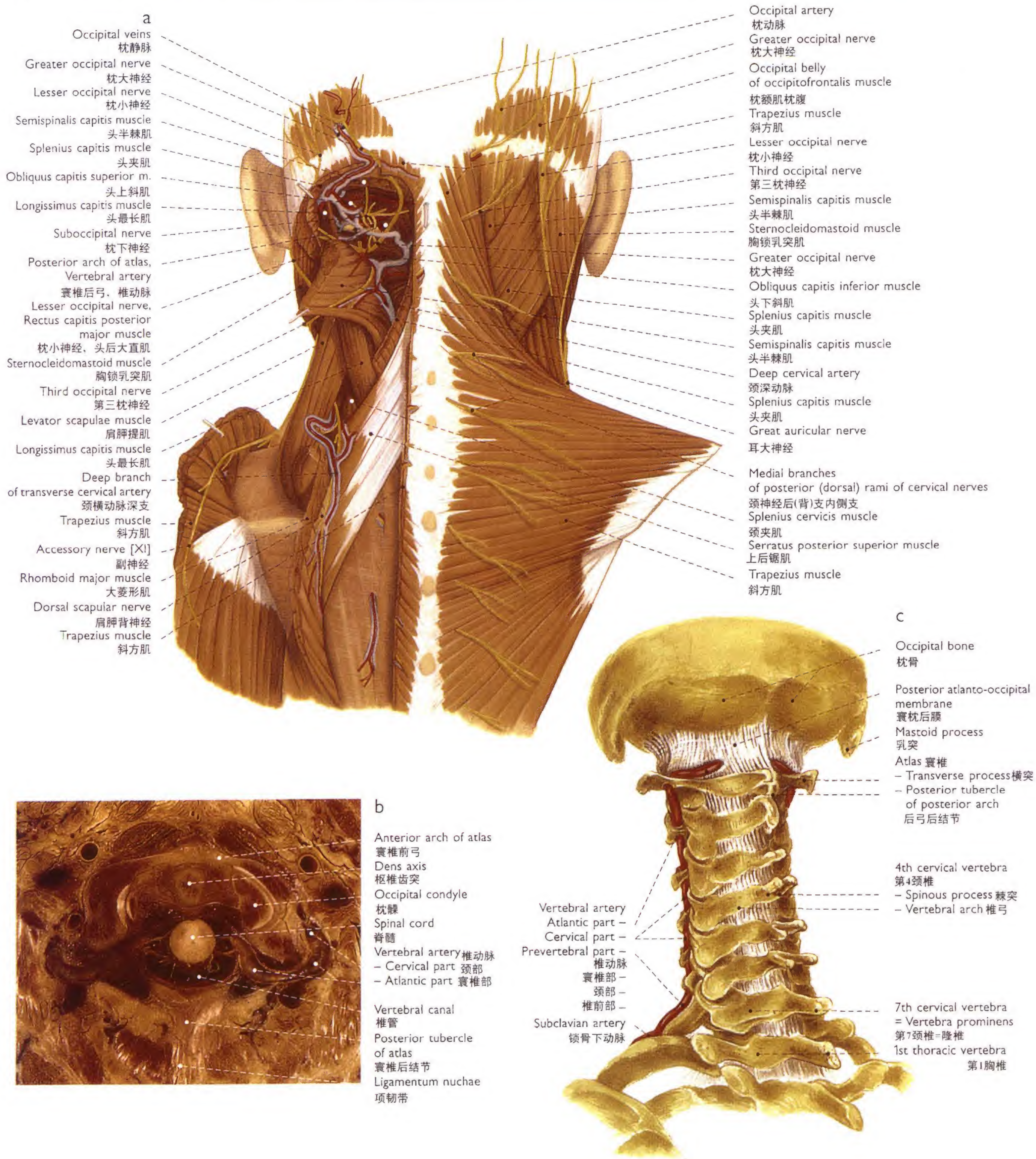
57 Muscles of the back proper (30%) 背固有肌
Superficial layer 浅层



58 Muscles of the back proper (30%) 背固有肌
Deeper layer 深层

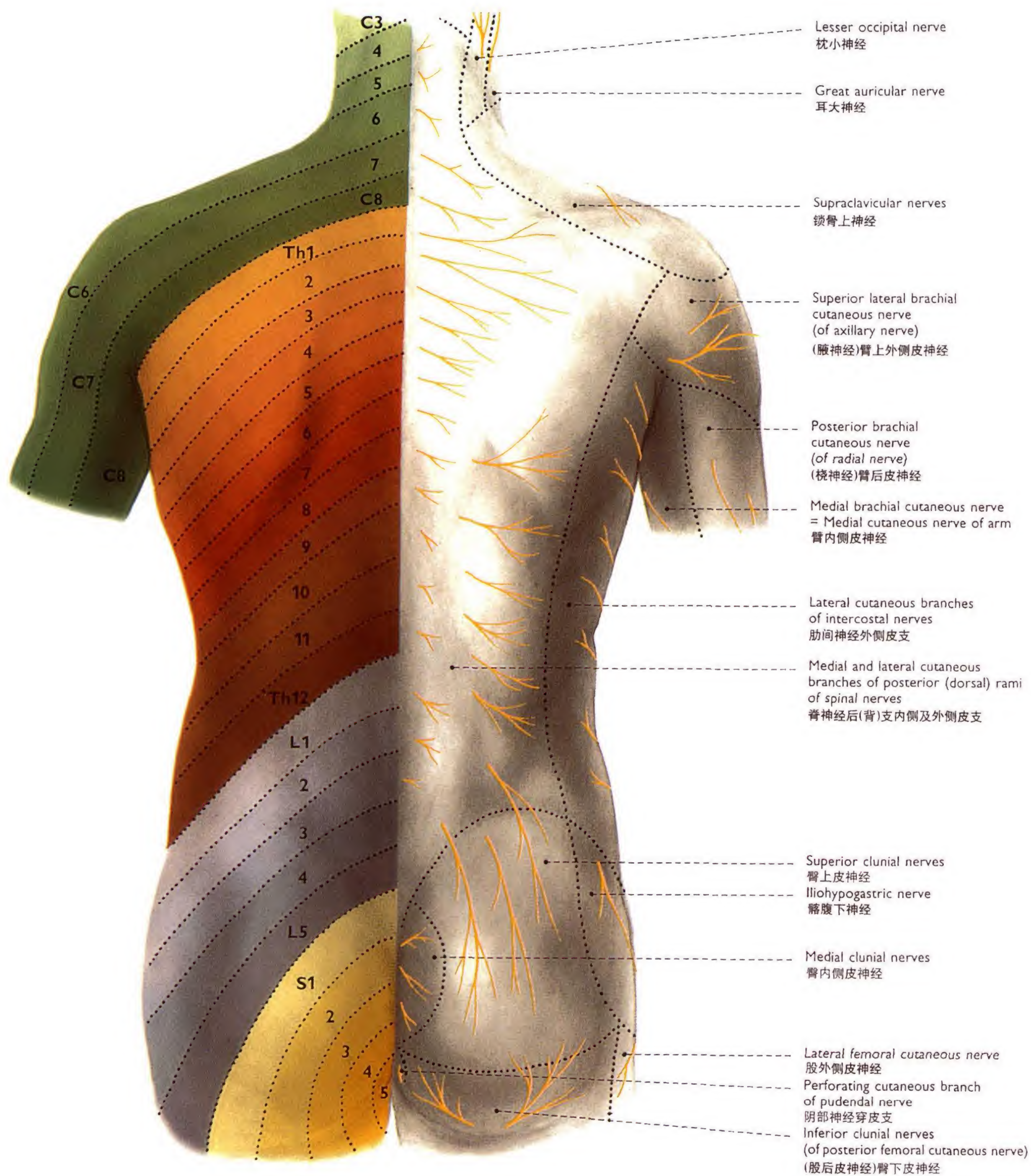


59 Muscles of the back proper (30%) 背固有肌
Deep layer 深层

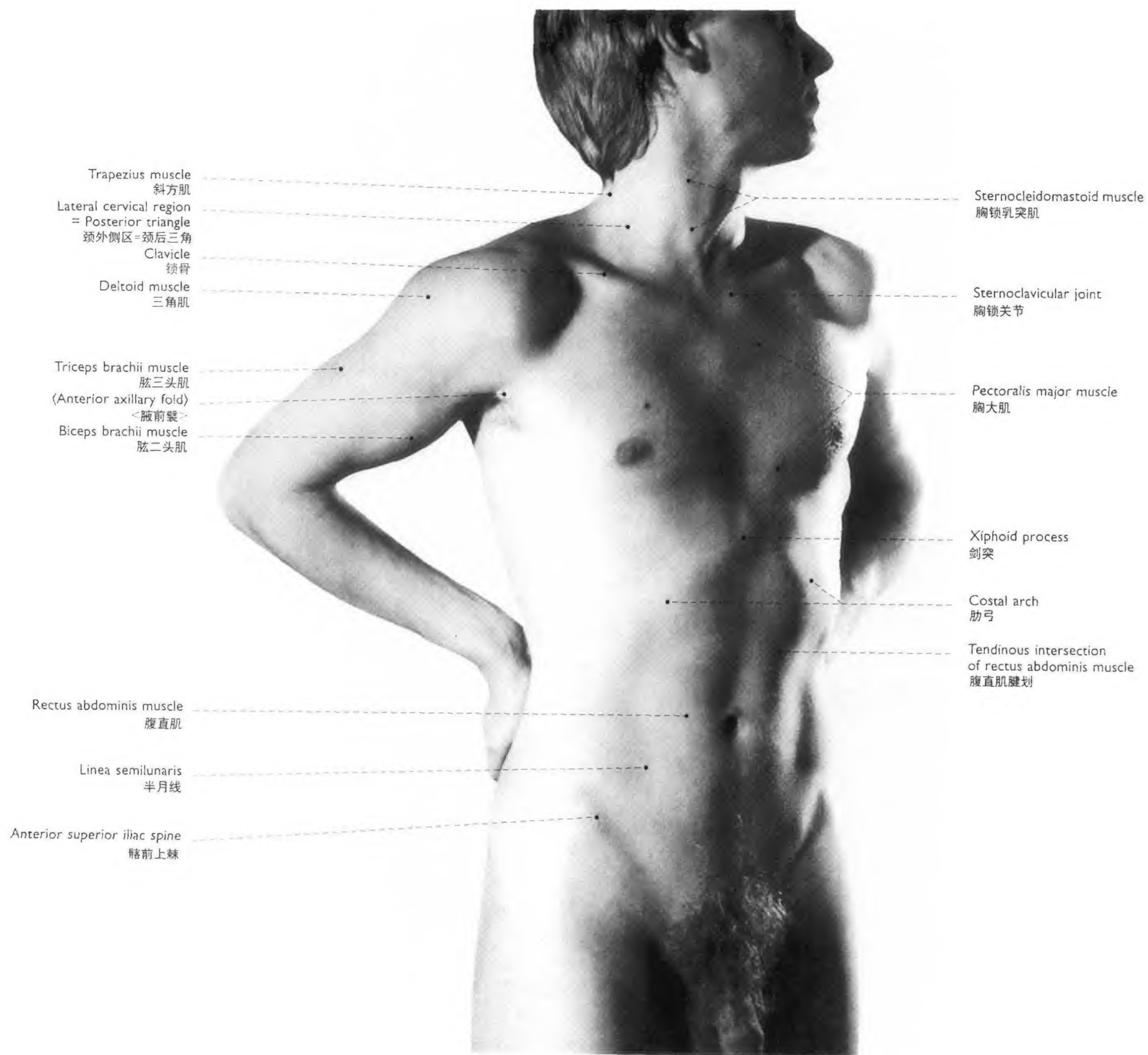


60 Neck and shoulder regions 颈及肩区

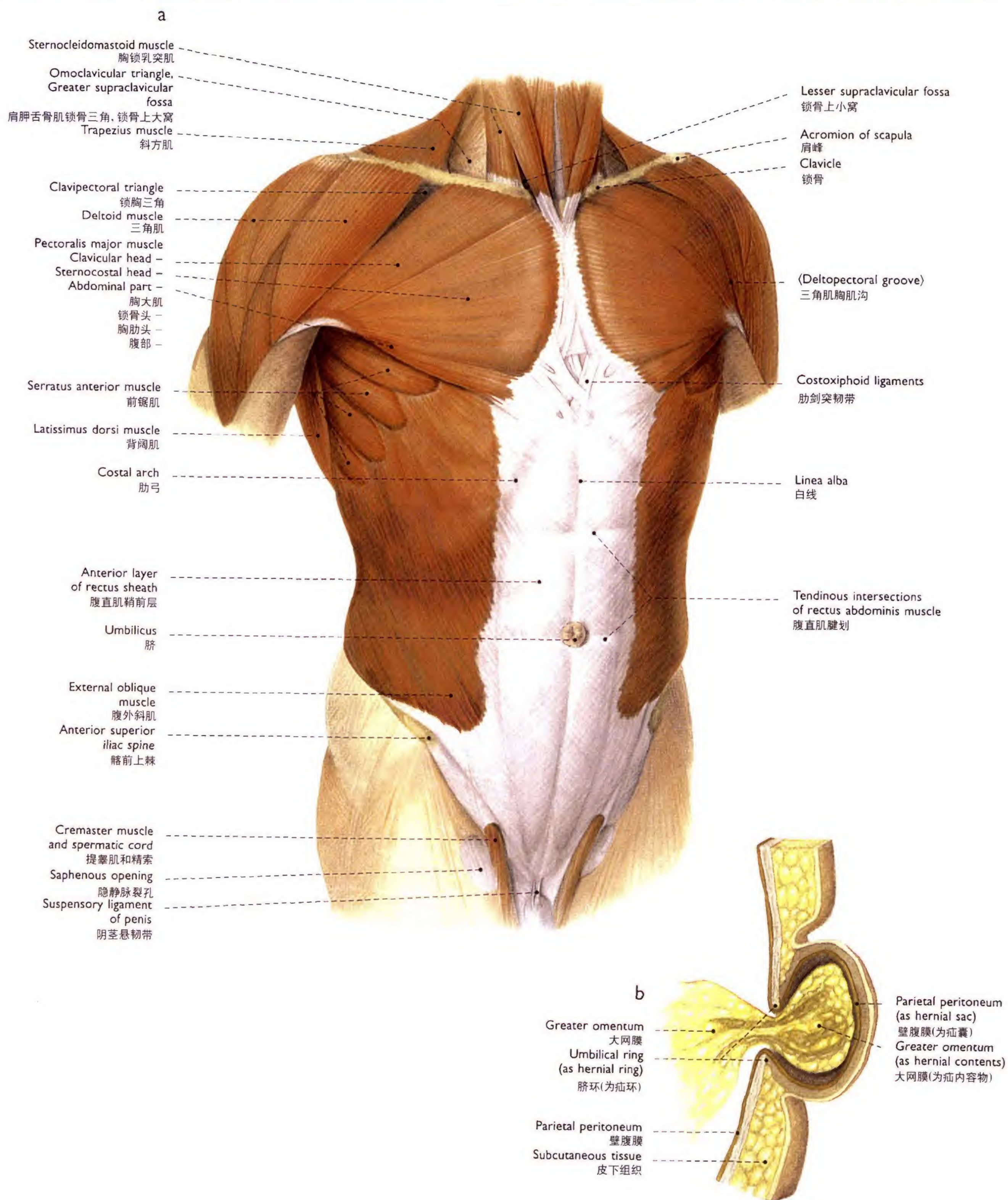
- a Right, superficial layer; left, deeper layer (40%). Dorsal aspect 右侧, 浅层; 左侧, 深层。后面观
- b Horizontal section at the level of the first cervical vertebra (= atlas) (60%). Cranial aspect 平第1颈椎(=寰椎)水平切面。上面观
- c Course of the vertebral artery (60%). Left dorsolateral aspect 椎动脉行程。左后外侧观



61 Cutaneous and segmental innervation of the dorsal body wall (25%) 身体背部皮神经及节段性分布
Schematic representation 示意图



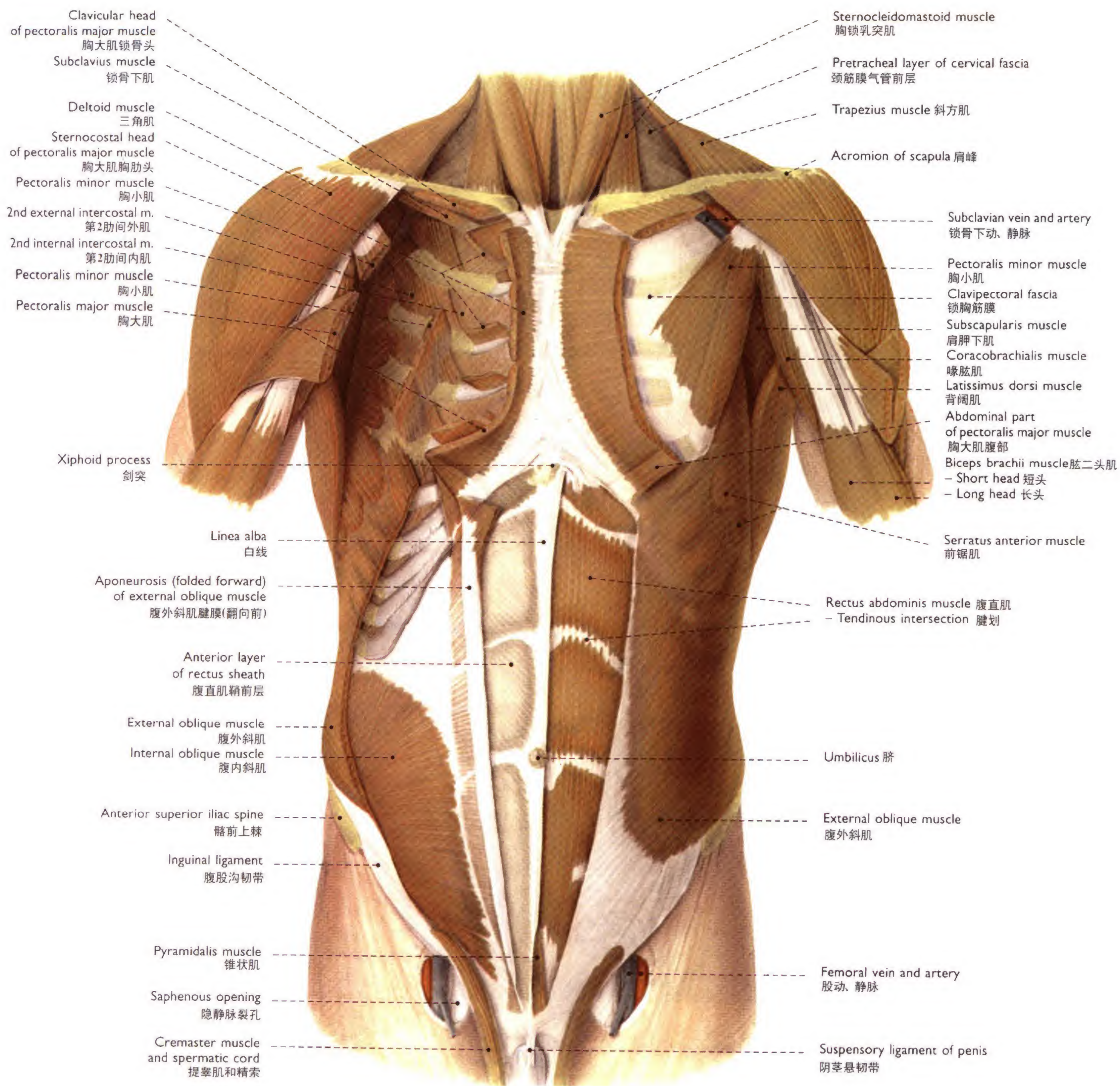
62 Surface anatomy of the thorax and abdomen of a male (20%) 男性胸腹表面解剖
Ventral aspect 前面观



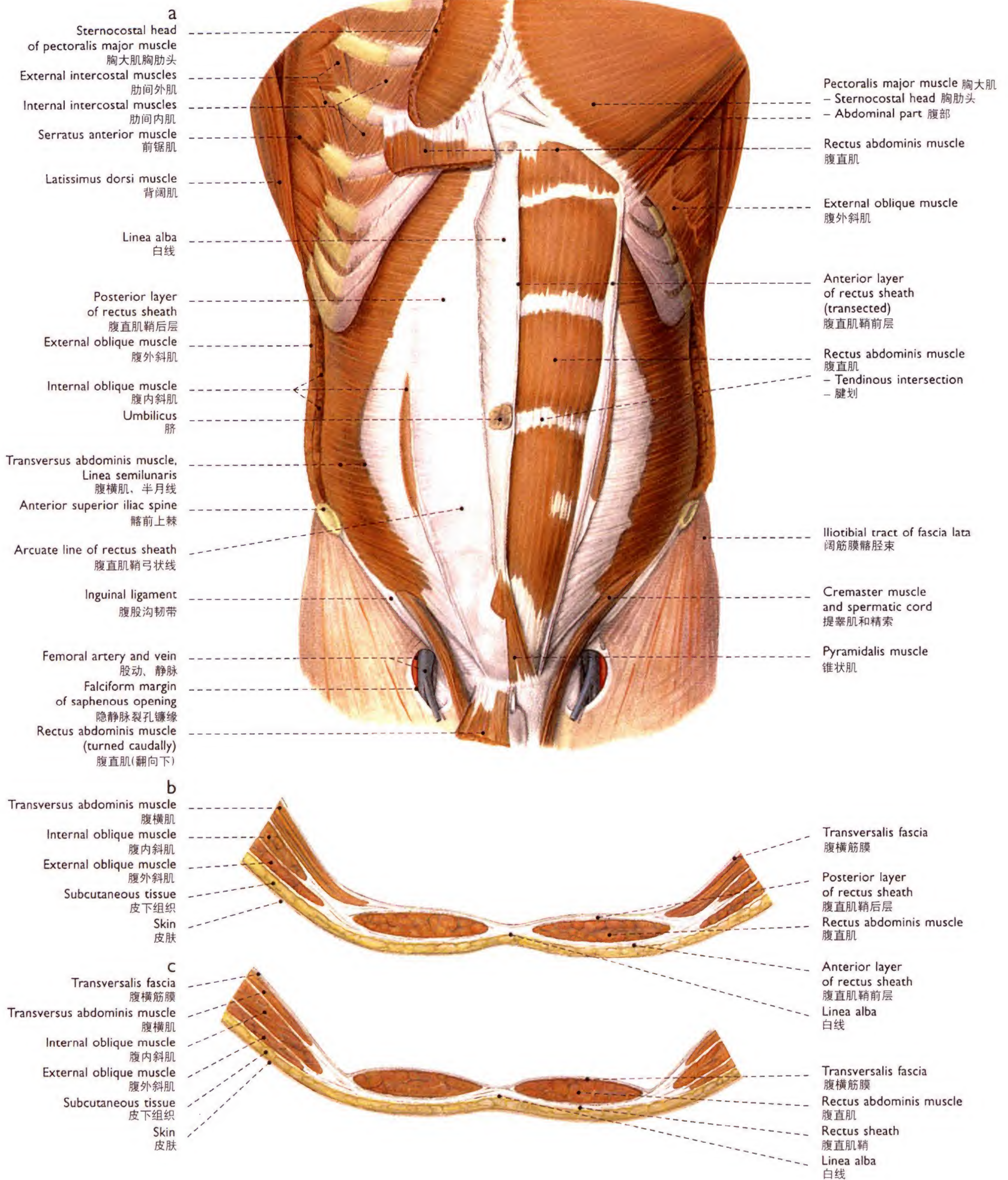
63 Ventral muscles of the trunk 躯干腹侧肌

a Superficial layer (25%) 浅层

b Schematic representation of an umbilical hernia 脐疝示意图

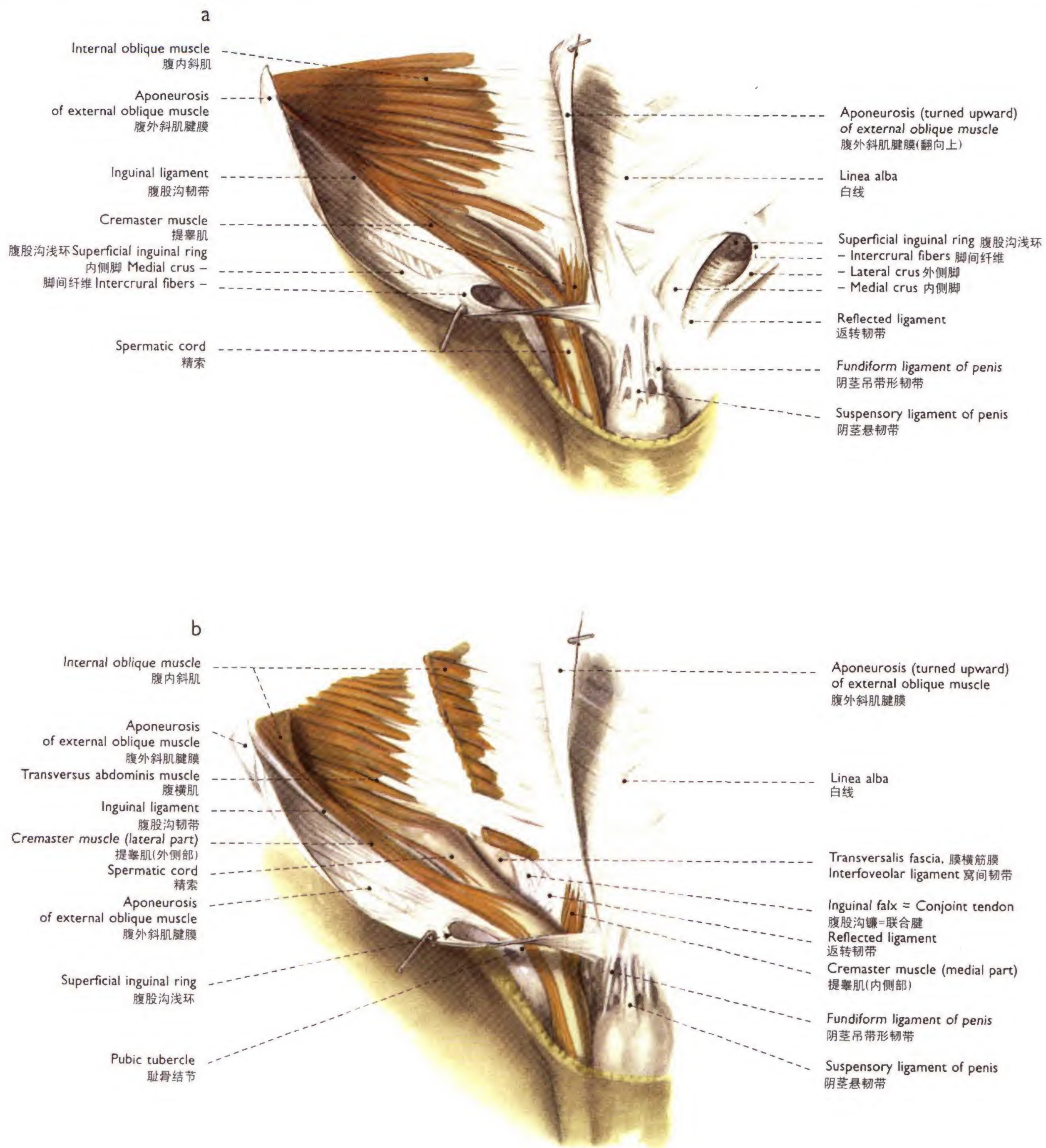


64 Ventral muscles of the trunk (25%) 躯干腹侧肌
Deeper layer 深层



65 Muscles of the abdomen 腹肌

- a Deepest layer (30%) 深层
- b, c Schematized transverse sections through the anterior abdominal wall (50%) 经腹前壁横断面示意图
- b above the umbilical region 脐区以上断面
- c below the arcuate line of rectus sheath 腹直肌鞘弓状线以下断面



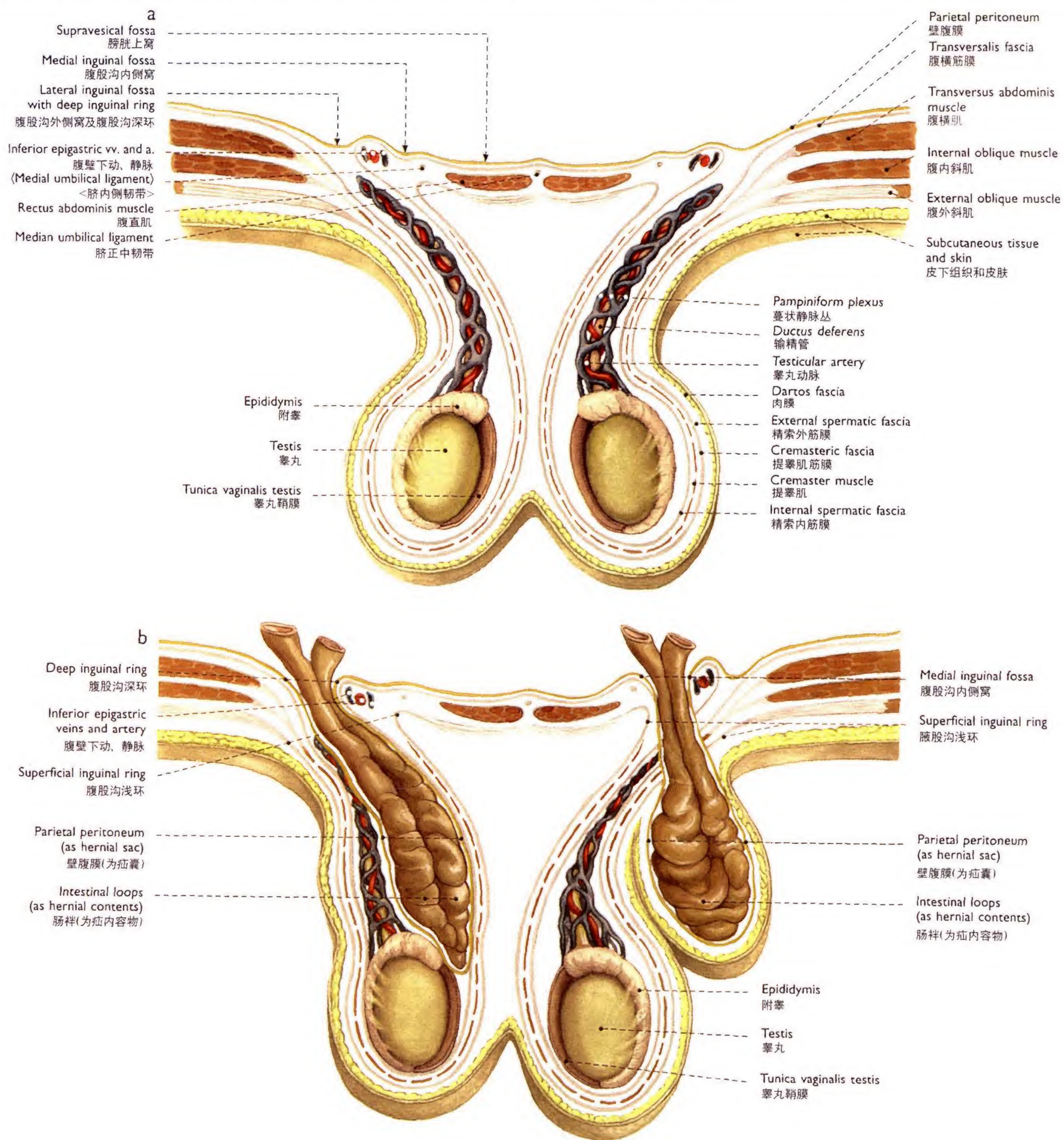
66 Inguinal region of a male (60%) 男性腹股沟区

a Superficial layer 浅层

b Deep layer 深层

a, b The two portions of the dissected aponeurosis of the external oblique muscle were retracted on the right side of the body. In fig. b, the internal oblique muscle was additionally removed partially. On the left side of the body in fig. a, the spermatic cord was taken away to demonstrate the inguinal canal. 在图a 中, 左侧精索被移走, 显示腹股沟管

右边显示腹外斜肌腱膜分成两部分。在图b中, 腹内斜肌部分移走。在图a 中, 左侧精索被移走, 显示腹股沟管



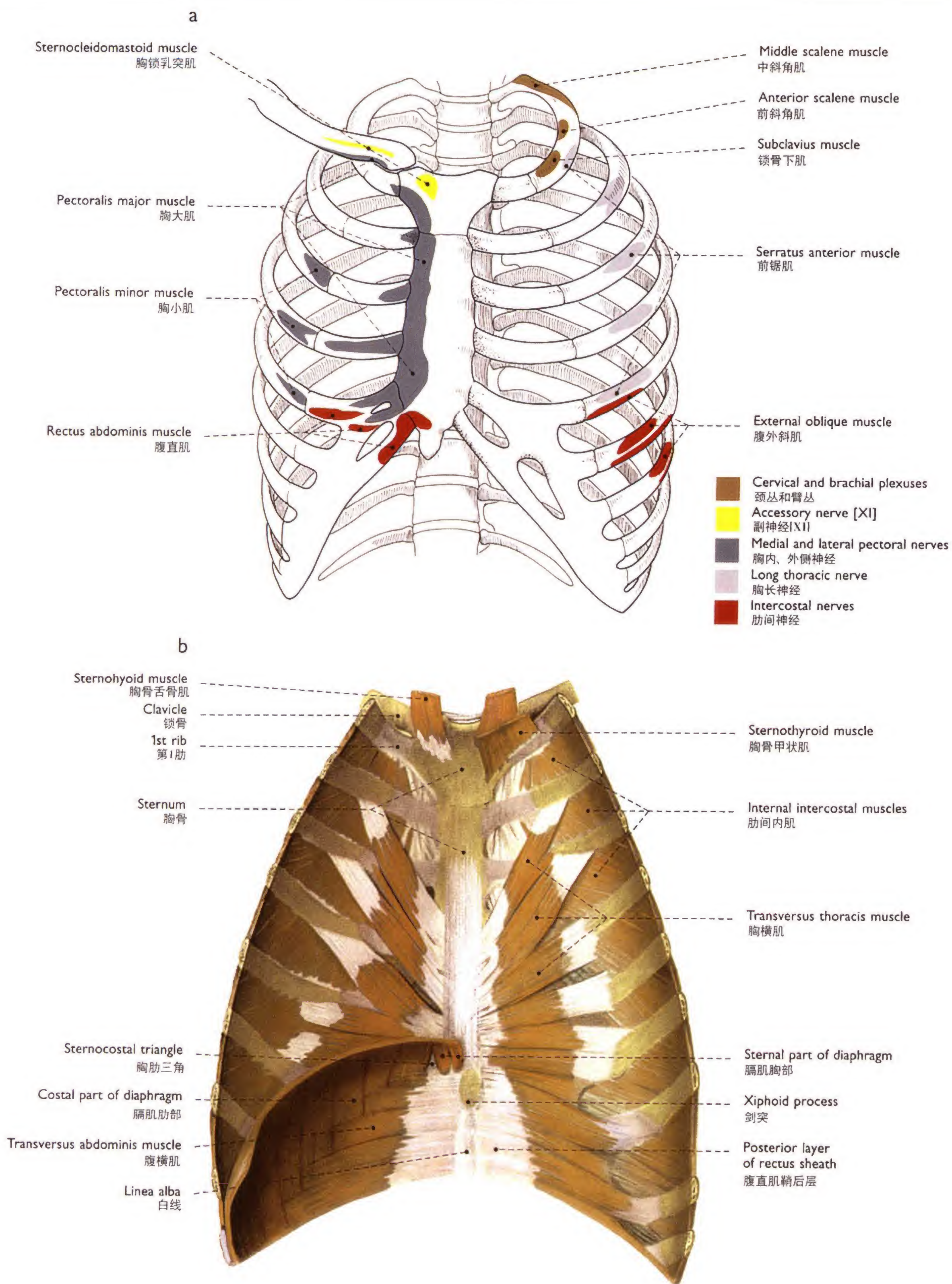
67 Inguinal region of a male 男性腹股沟区

a, b Schematized sections through the anterior abdominal wall on the level of the inguinal canal and through the scrotum (according to Benninghoff, 1985). 经腹前壁腹股沟管和阴囊切面示意图

a Normal situation 正常状况下

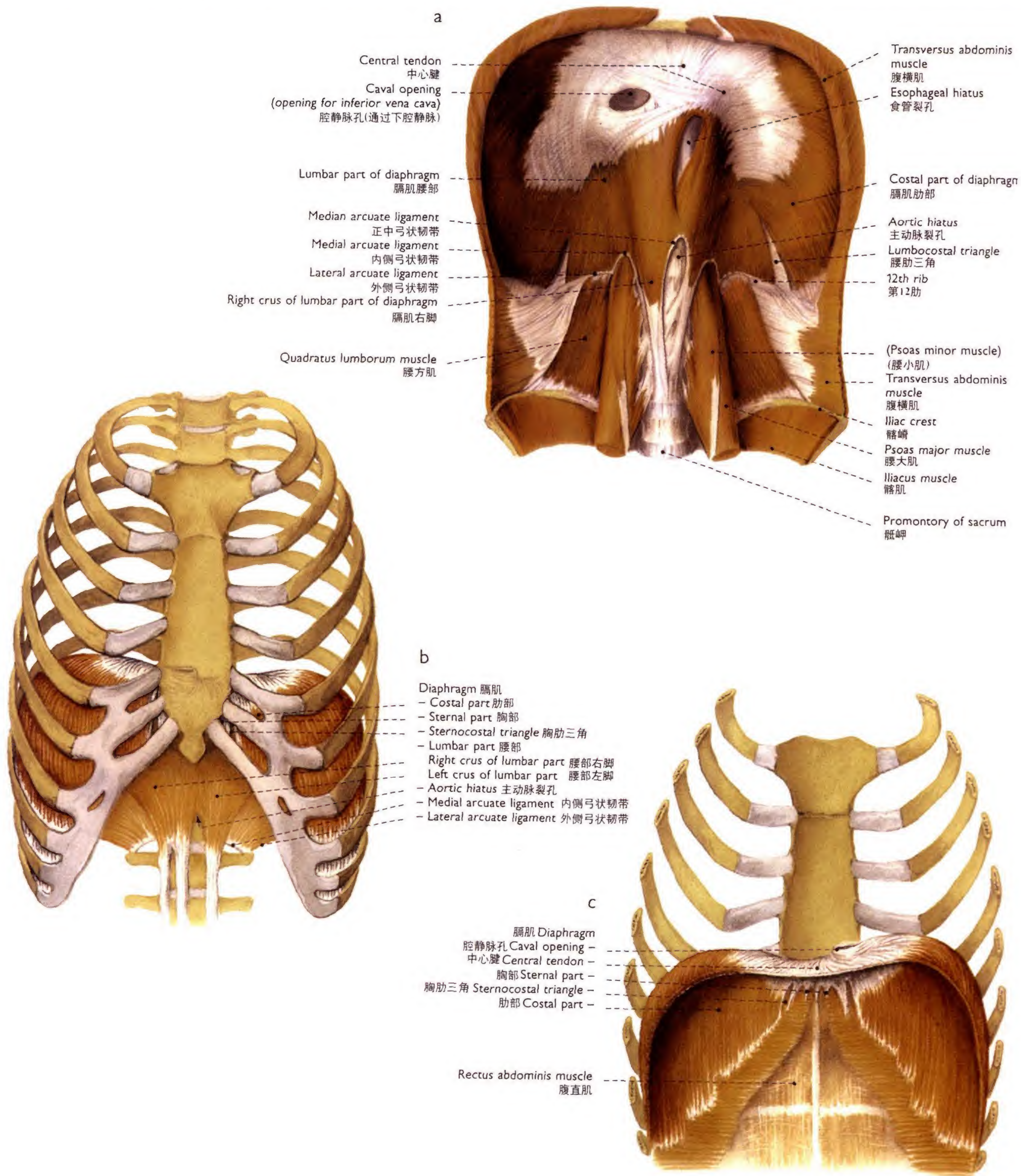
b Inguinal herniae. On the right side of the body, a lateral indirect hernia through the inguinal canal; the inner hernial ring is the deep inguinal ring lateral to the inferior epigastric vessels. On the left side of the body, a medial direct hernia; the inner hernial ring is the medial inguinal fossa medial to the inferior epigastric vessels.

腹股沟疝。左侧显示通过腹股沟管的斜疝，内疝环为位于腹壁下血管外侧的腹股沟深环。左侧显示直疝，内疝环为位于腹壁下血管内侧的腹股沟内侧窝。



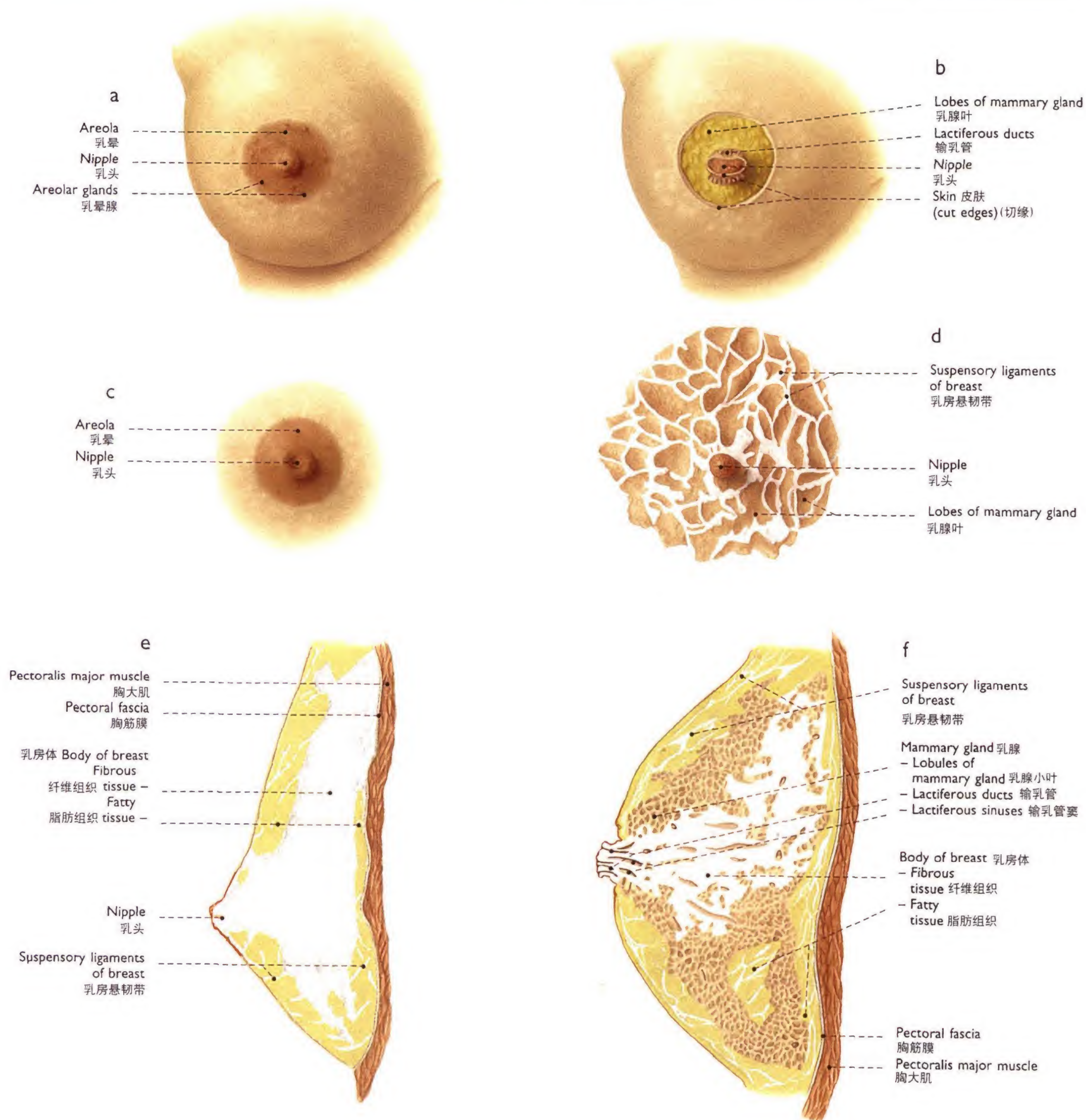
68 Ventral muscles of the trunk 躯干腹侧肌

- a Muscle attachments on the ventrolateral thorax.
The colors indicate the innervation. 胸前外侧壁肌起、止点彩色。显示神经支配来源
- b Internal aspect of the anterior chest wall and the genuine muscles of the thorax (35%) 胸前壁内面观和胸固有肌



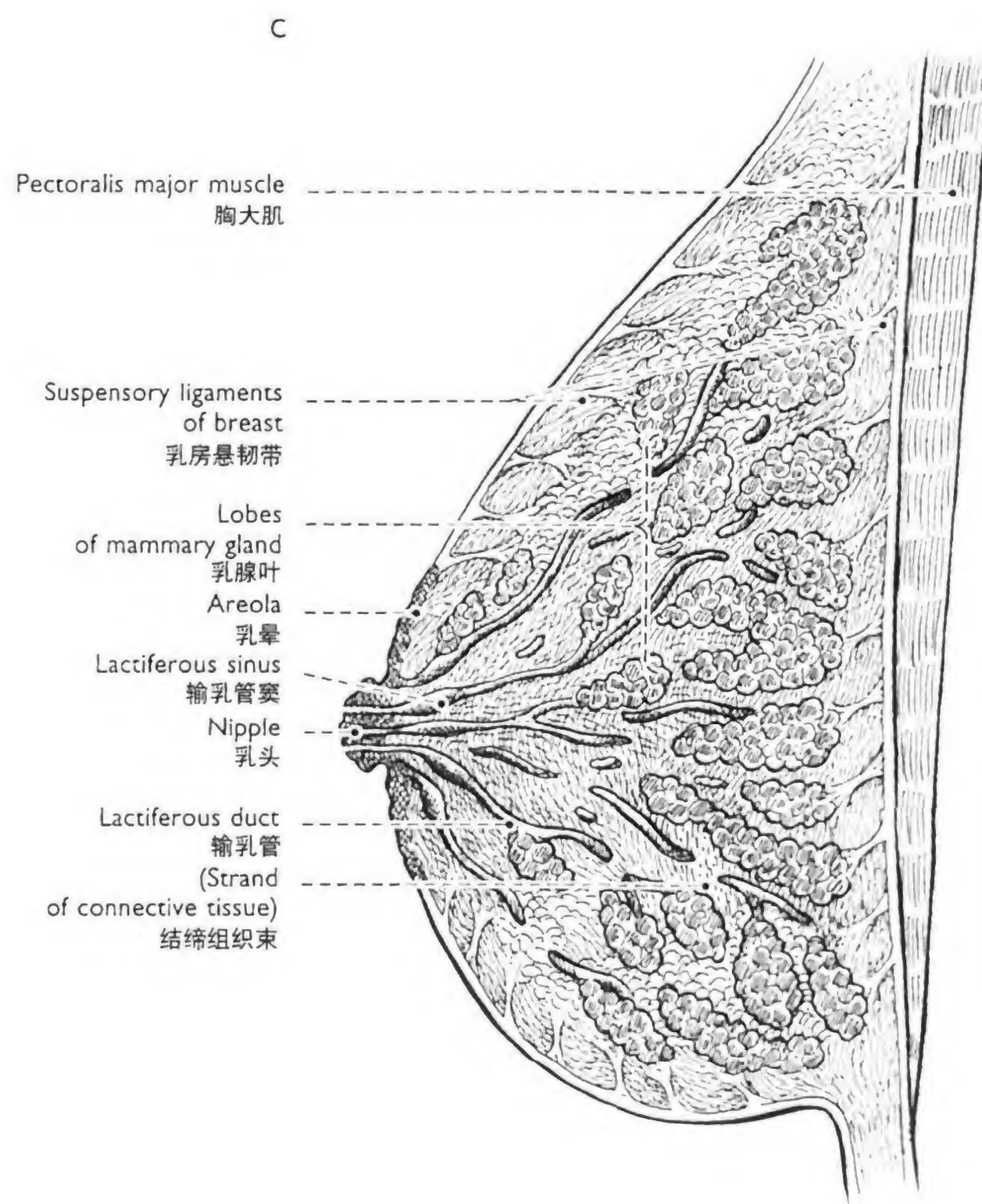
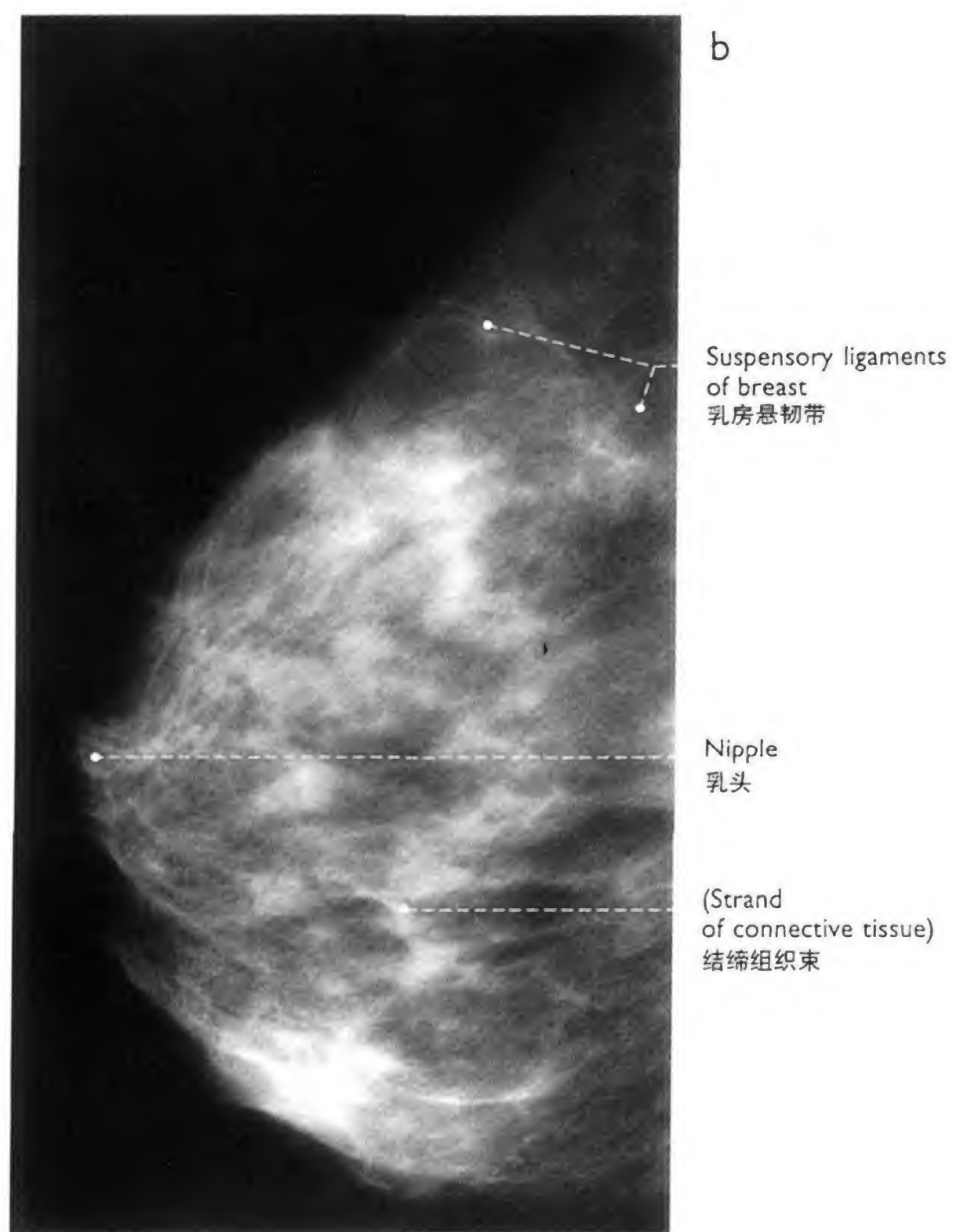
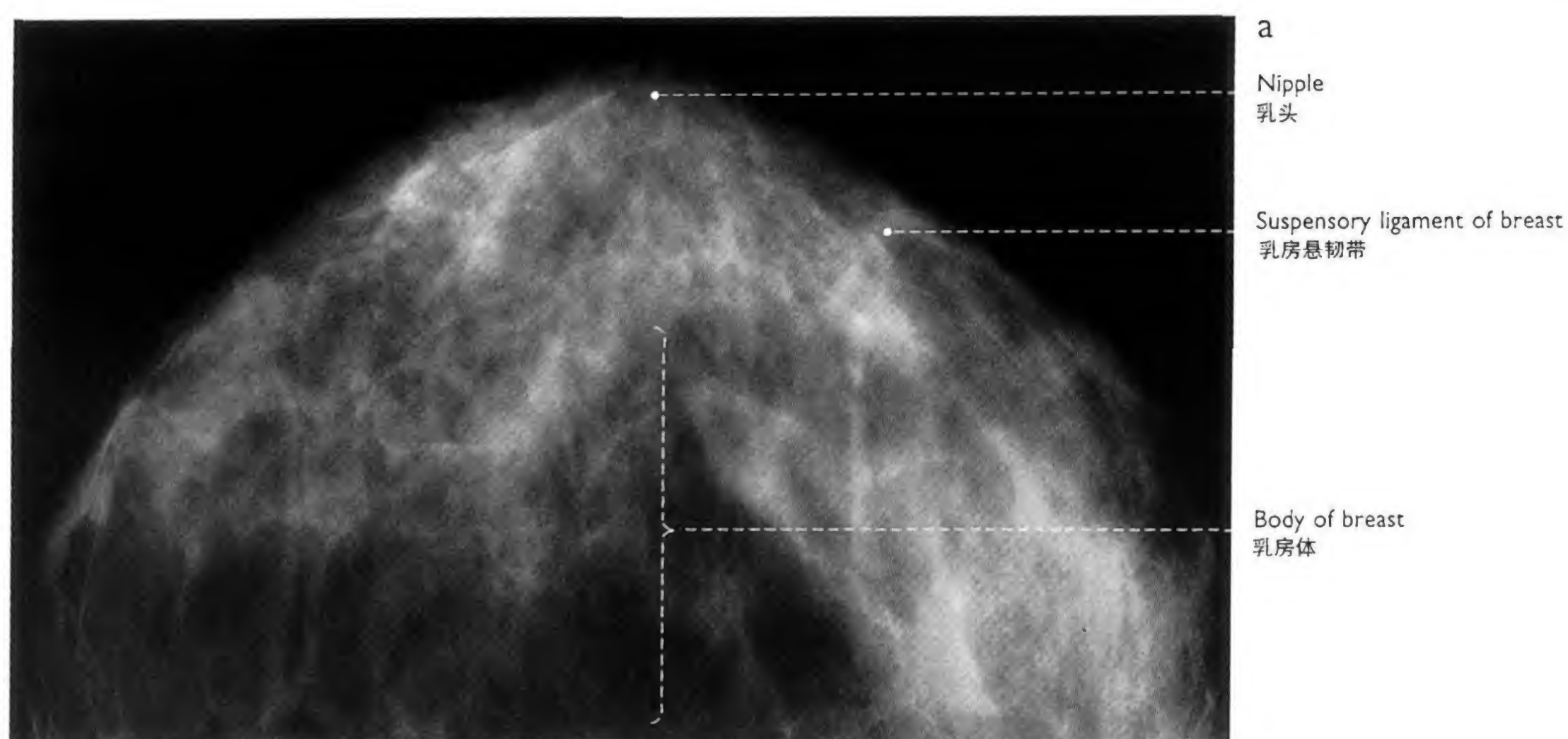
69 Diaphragm (30%) 膈肌

- a Caudal aspect 下面观
b Ventral aspect 前面观
c Dorsal aspect 后面观



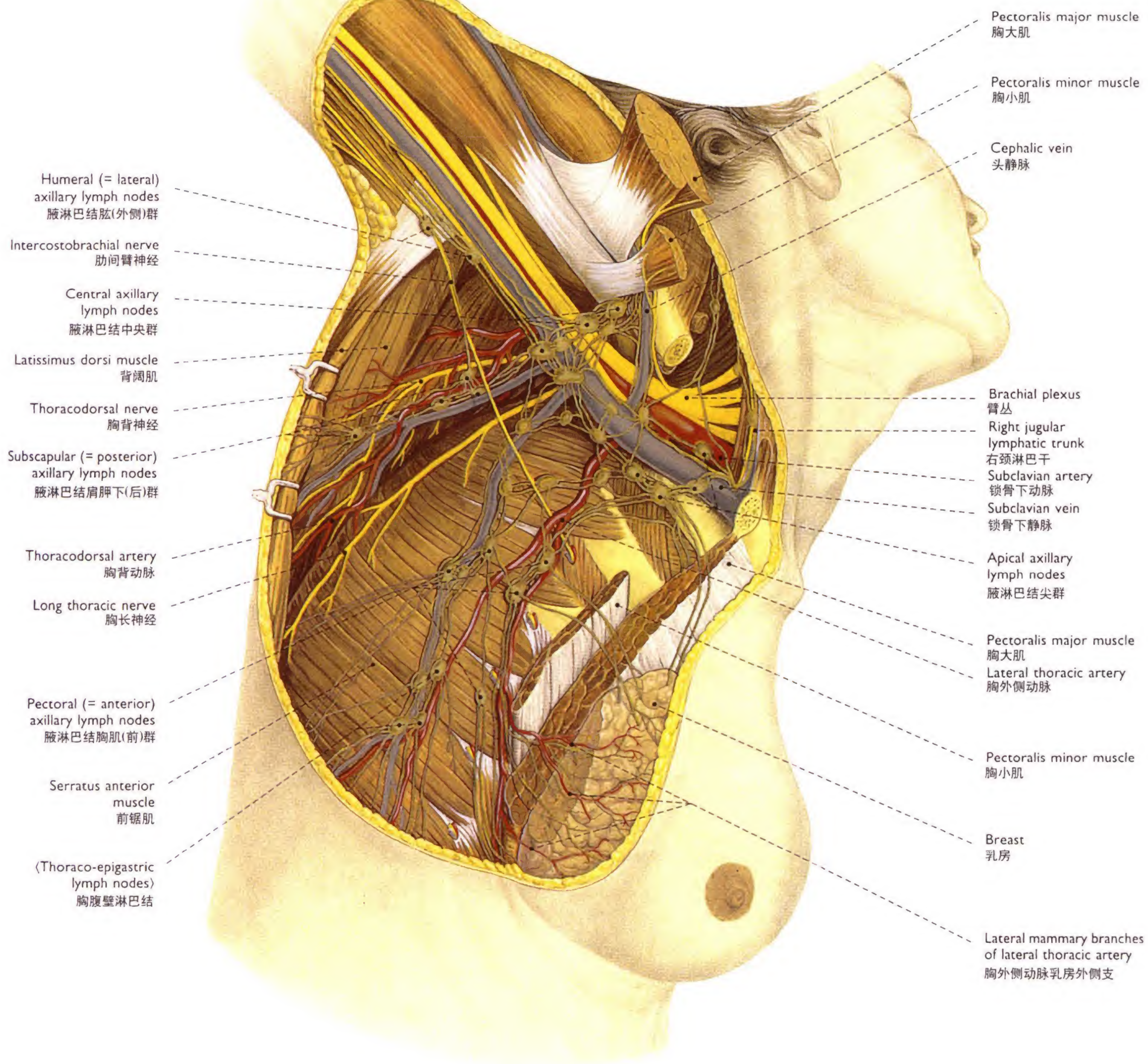
70 Breast 乳房

- a Ventral aspect (40%) 前面观
b Ventral aspect (40%). The skin around the nipple was removed. 前面观, 围绕乳头的皮肤被切除
c Depressed nipple (70%) 乳头内陷
d Parenchyma of the mammary gland after removal of the skin and the subcutaneous tissue (40%) 切除皮肤和皮下组织的乳腺实质
e Sagittal section through the breast of a 16-year-old non-pregnant nullipara (60%) 16岁未孕女性乳腺矢状切面
f Sagittal section through the breast of a 28-year-old woman immediately before lactation (60%) 28岁妇女产前乳腺矢状切面

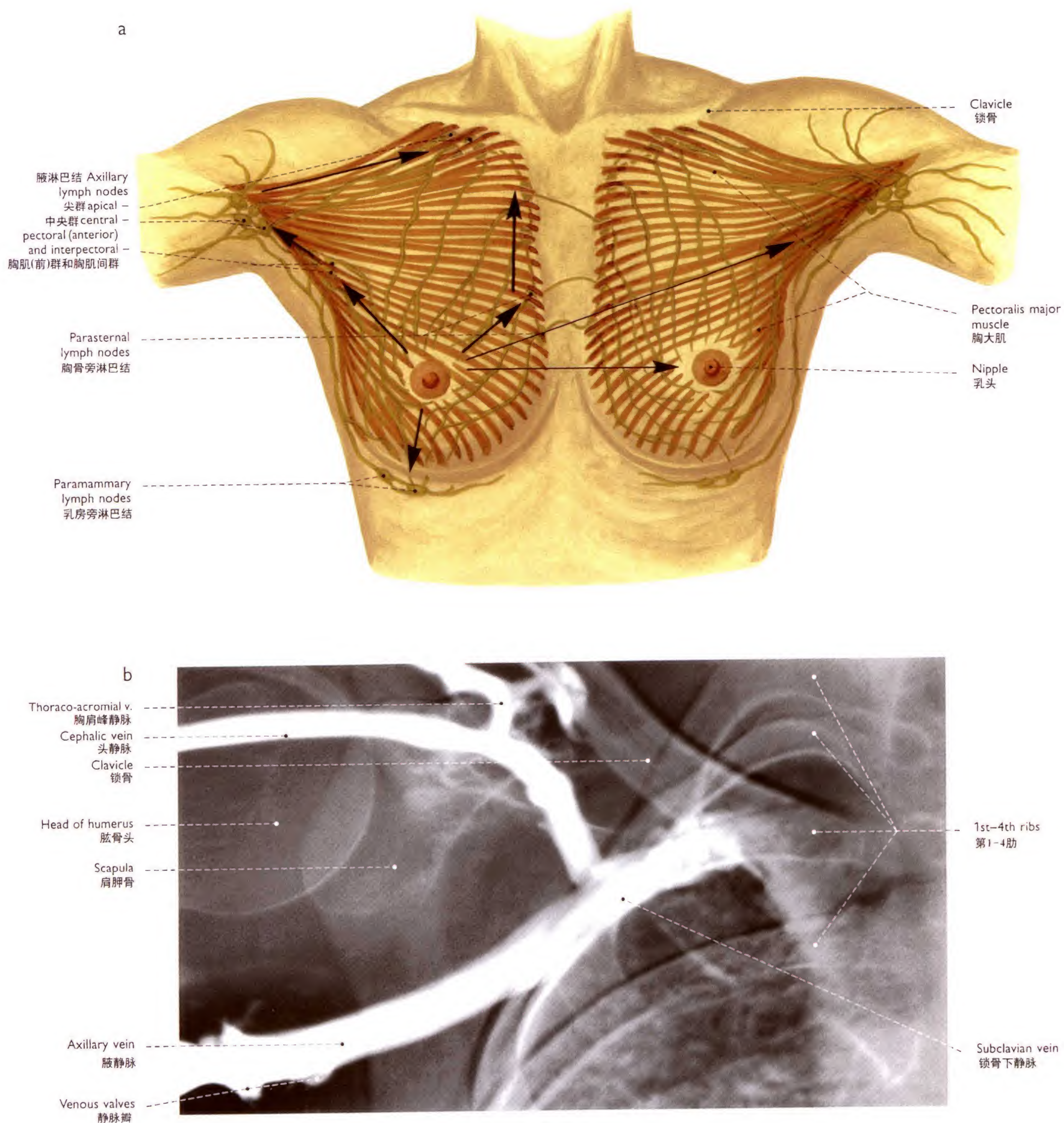


71 Breast 乳房

- a, b Mammograms 乳房图像
- a Craniocaudal radiogram 上下位X线图像
- b Lateral radiogram 侧位X线图像
- c Construction of the breast,
schematized representation of a sagittal section 乳房构造, 矢状切面示意图



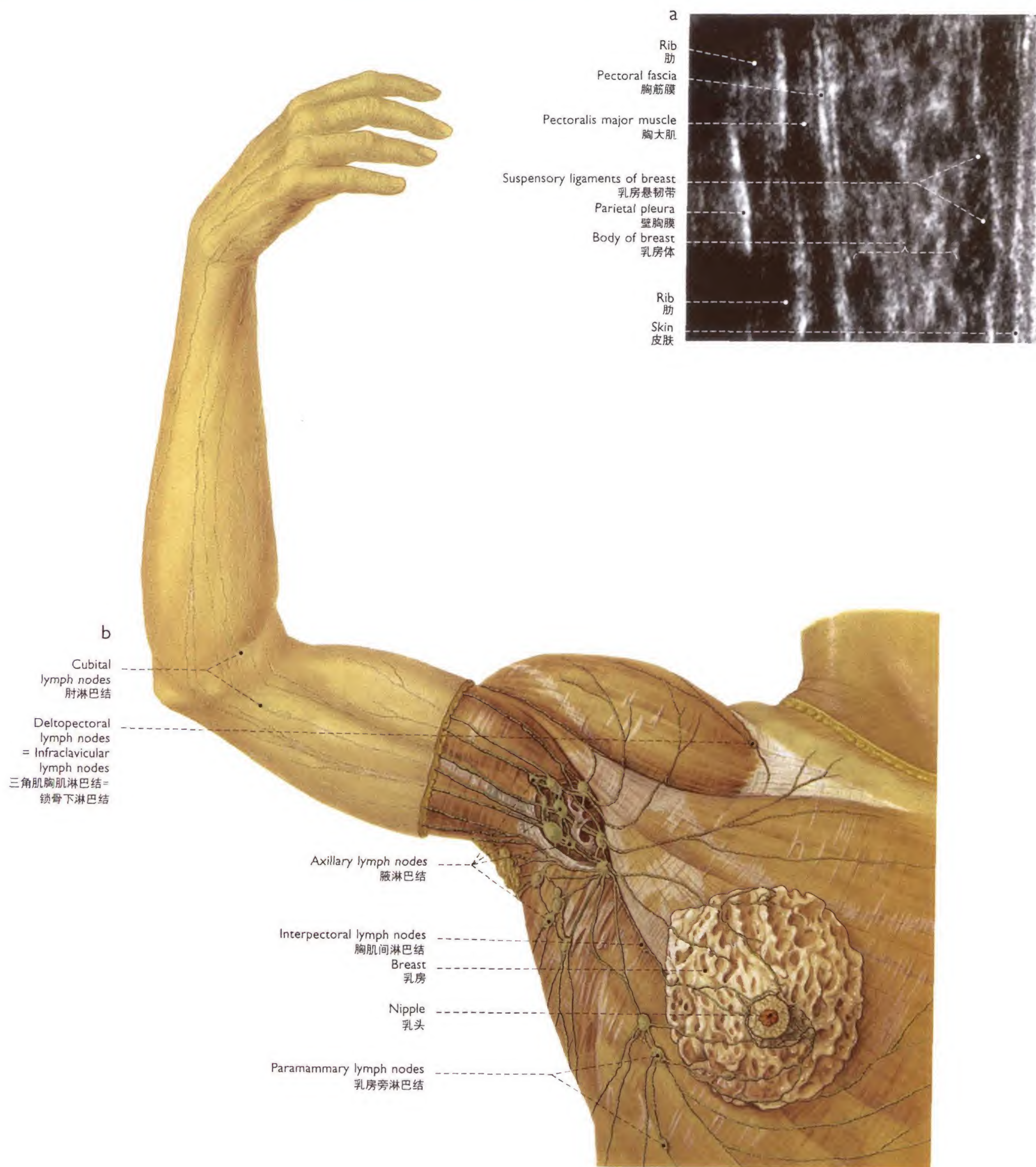
72 Lymphatic vessels and lymph nodes of the axilla and the anterior chest wall (50%) 腋窝和胸前壁淋巴管及淋巴结
Lateral aspect 侧面观



73 Lymphatic vessels, lymph nodes, and veins of the axilla and anterior chest wall

腋窝和胸前壁淋巴管、淋巴结及静脉

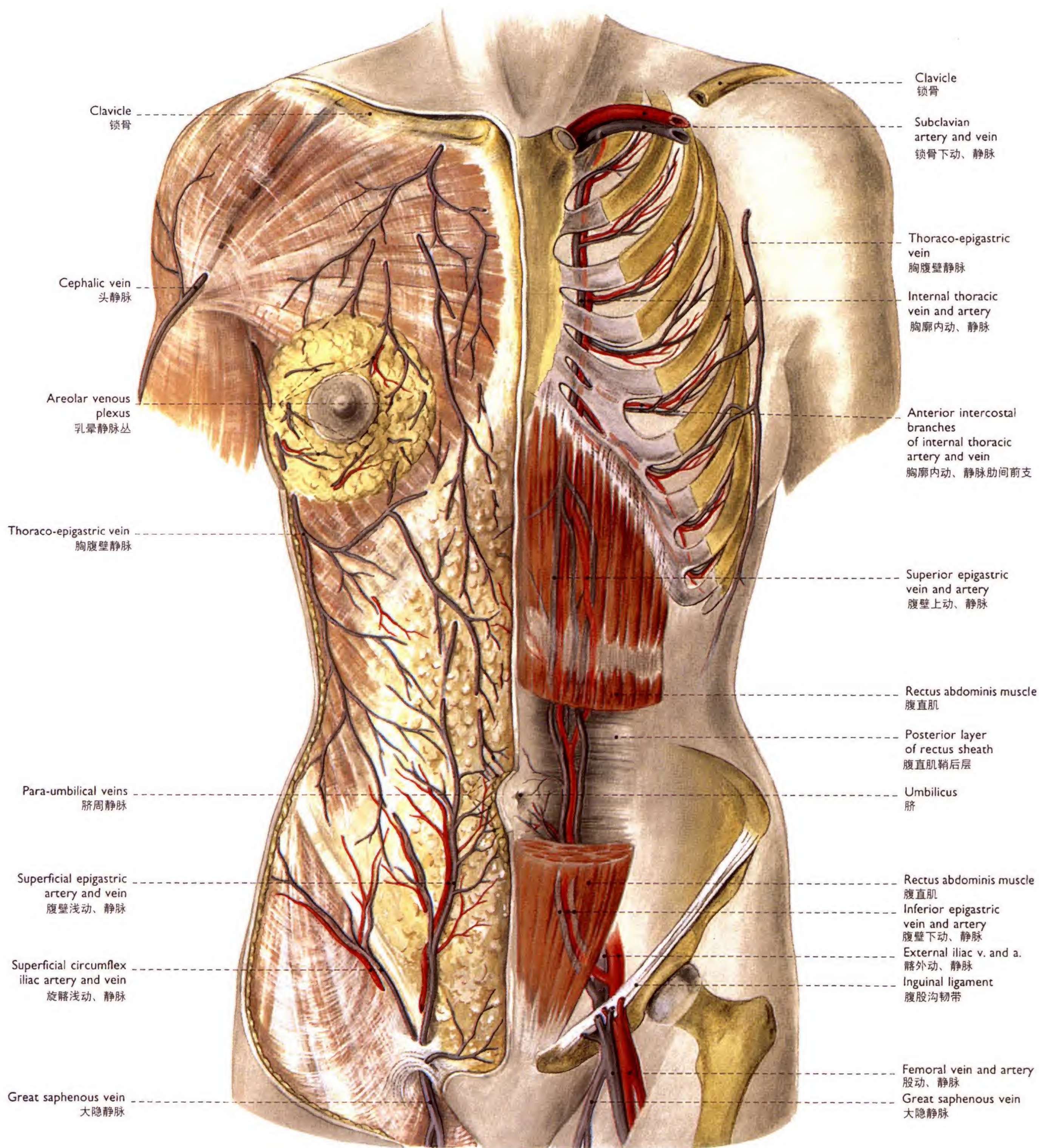
- a Schematic representation of the lymphatic drainage from the right breast (30%). The arrows illustrate the main ways of drainage. 右乳房淋巴回流示意图, 箭头指示主要淋巴回流途径
- b Venogram of the veins of the axilla after injection of contrast medium, postero-anterior radiogram (80%) 腋窝静脉造影, 后前位X线图像



74 Breast, lymphatic vessels and lymph nodes of the upper limb and the breast

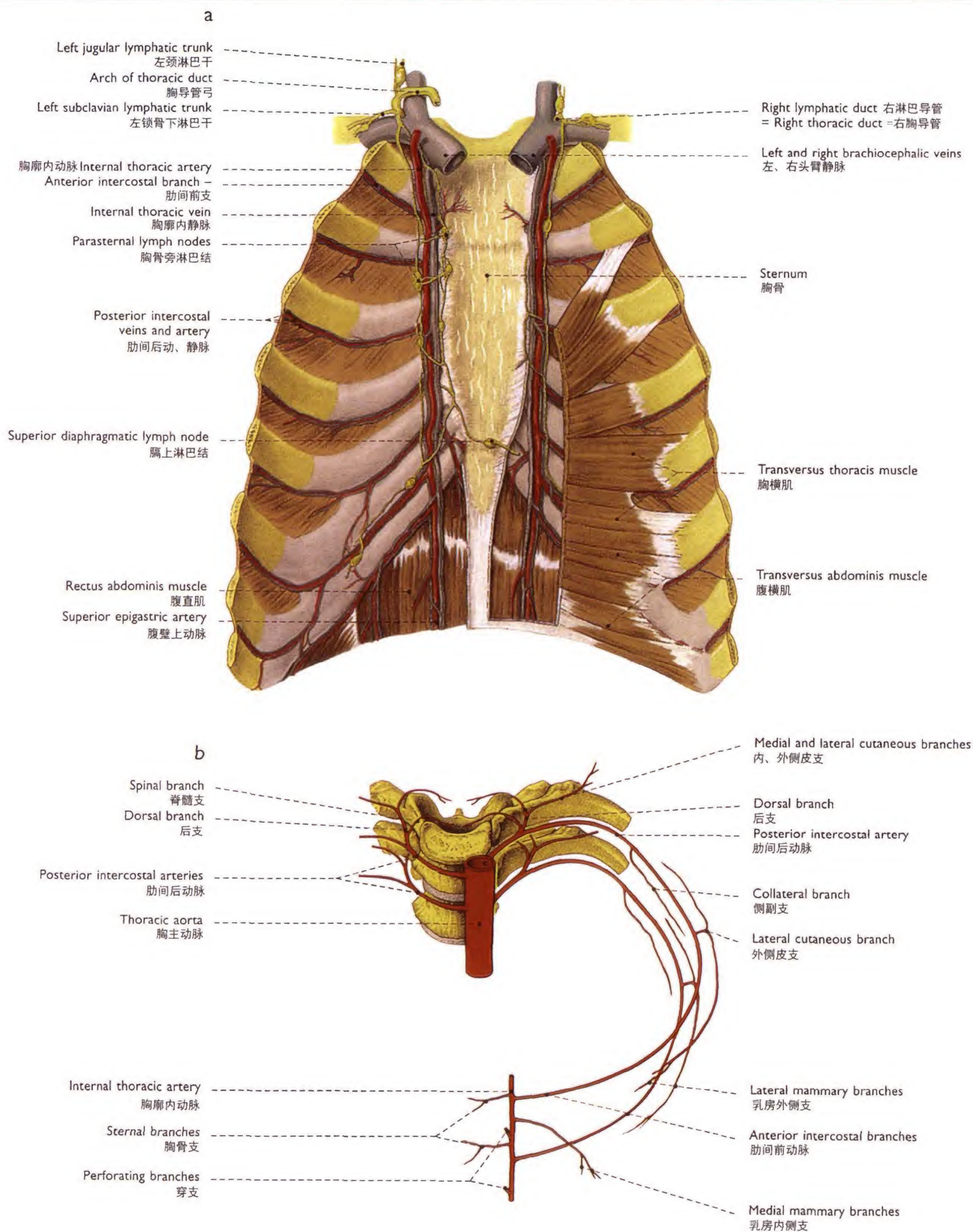
乳房、上肢及乳房淋巴管和淋巴结

- a Sonogram (ultrasonic image) of the breast, sagittal section 乳房超声图像, 矢状切面
 b Lymphatic drainage from the upper limb and the breast (35%), ventral aspect 上肢和乳房淋巴回流, 前面观



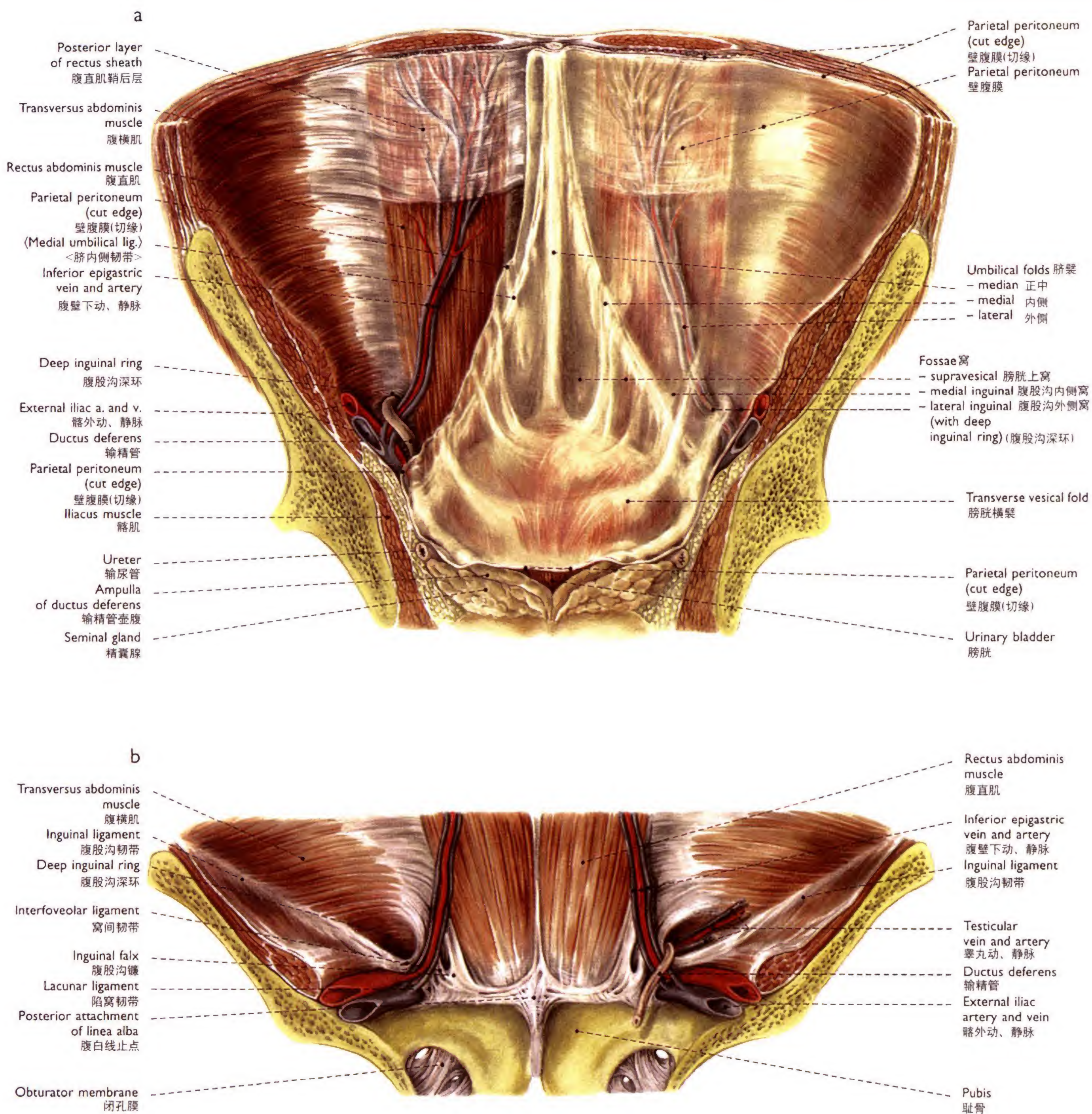
75 Blood vessels of the ventral body wall (35%) 身体腹侧血管

On the right side of the body, superficial vessels in the subcutaneous fatty tissue: 右侧显示皮下脂肪组织内的浅表血管
 on the left side of the body, deep vessels shining through the covering layers (the rectus abdominis muscle is cut above and below the umbilical region) 左侧显示深部血管经行于覆盖层深面, 脐上、下的腹直肌被切除



76 Blood and lymphatic vessels of the thorax 胸廓血管和淋巴管

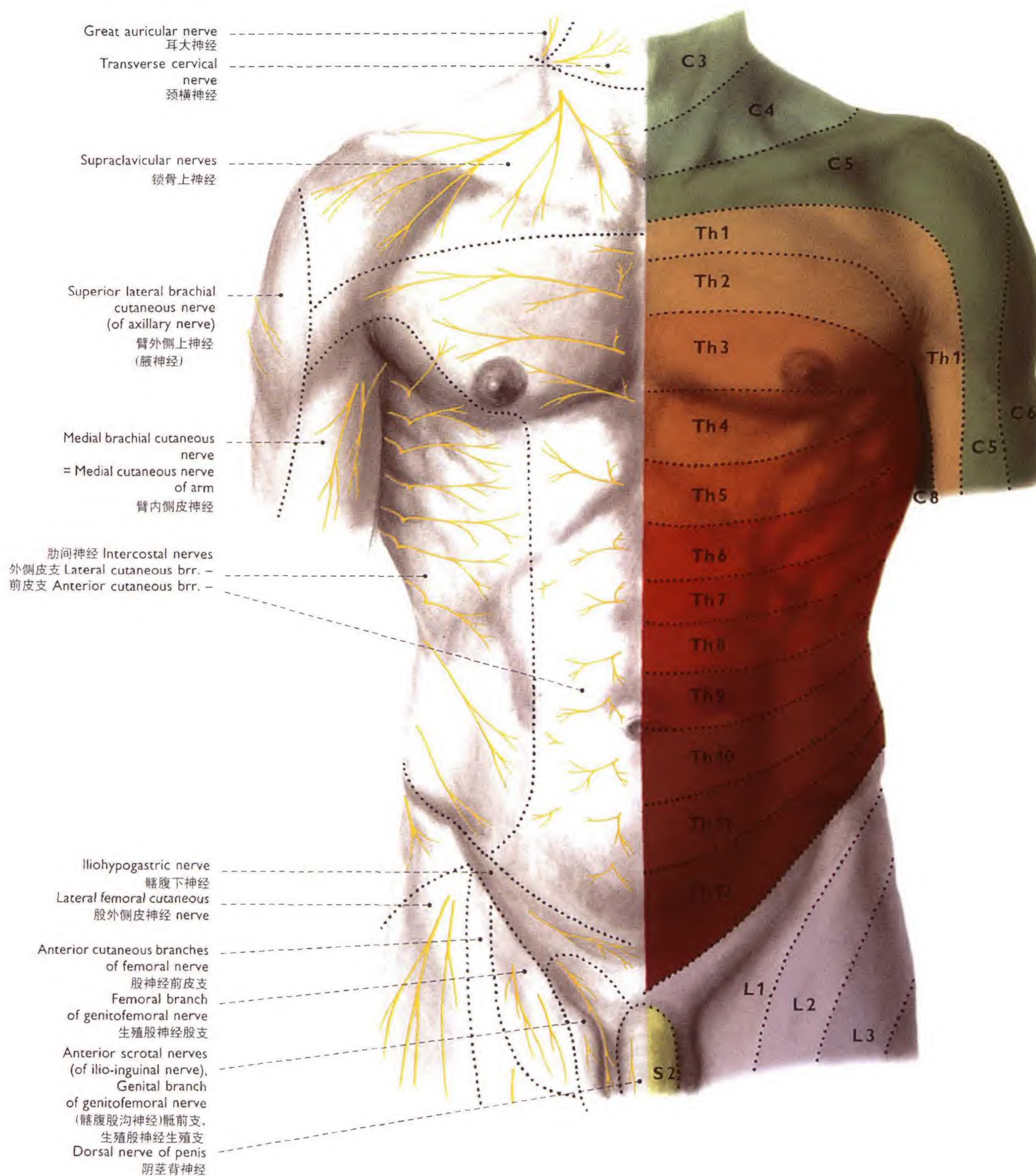
- a Internal aspect of the anterior chest wall (35%) 胸前壁内面观
b Segmental arteries of the body wall, cranioventral aspect of the left half (30%) 身体节段性动脉, 左侧半前上面观



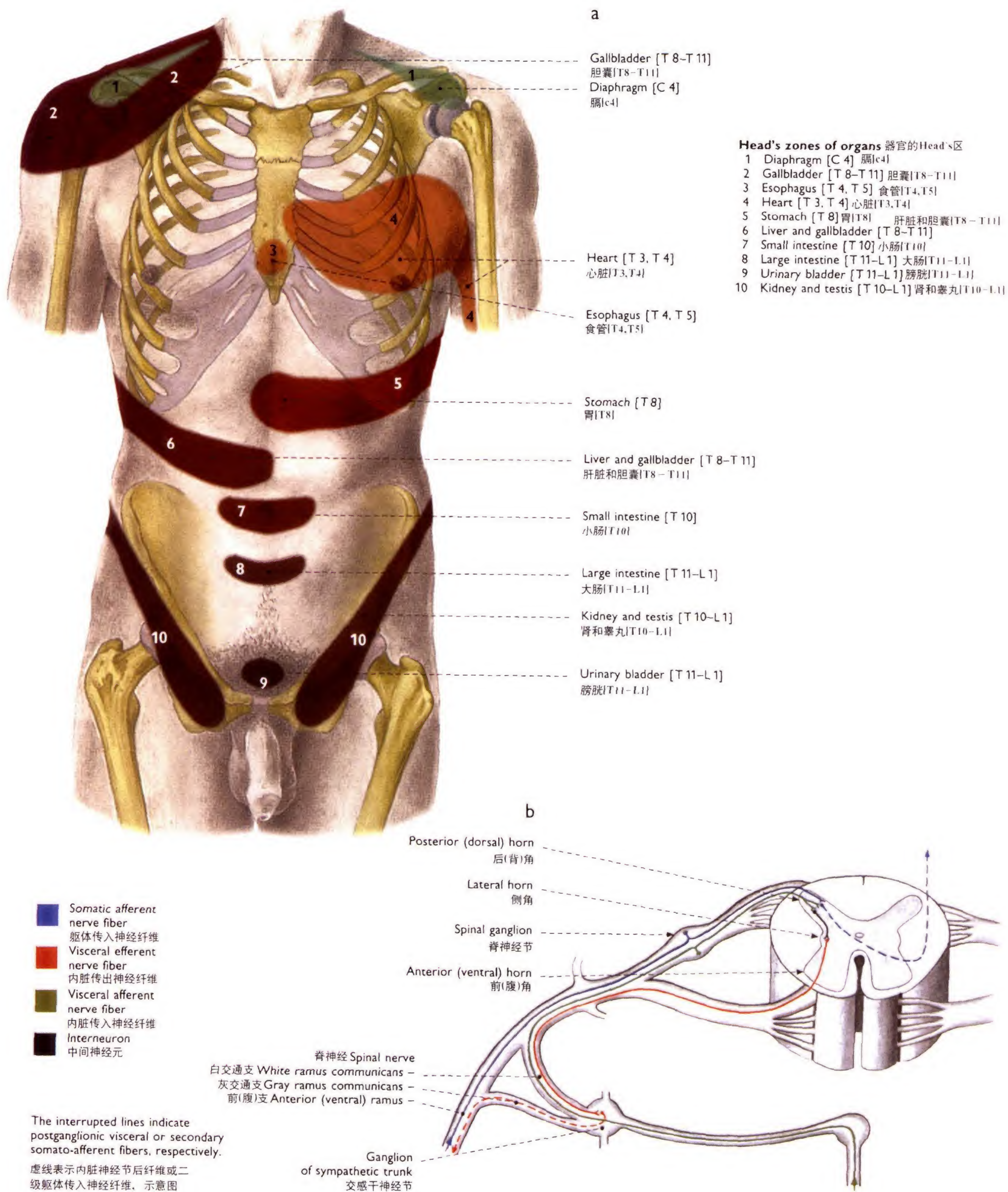
77 Inner surface of the anterior abdominal wall (50%) 腹前壁内面

Dorsal aspect 后面观

- a Area between the umbilical region and the lesser pelvis, covered completely by peritoneum on the right side, but only partially on the left side 脐区与盆之间区域显示右侧完全被腹膜覆盖, 左侧部分性覆盖
- b Inguinal and pubic regions without peritoneal covering; 腹股沟和耻骨联合区无腹膜覆盖; on the right, the ductus deferens is additionally shown. 右侧显示了输精管



78 Cutaneous and segmental innervation
of the ventral body wall (25%) 身体腹侧皮神经和节段性神经支配
Schematic representation 示意图

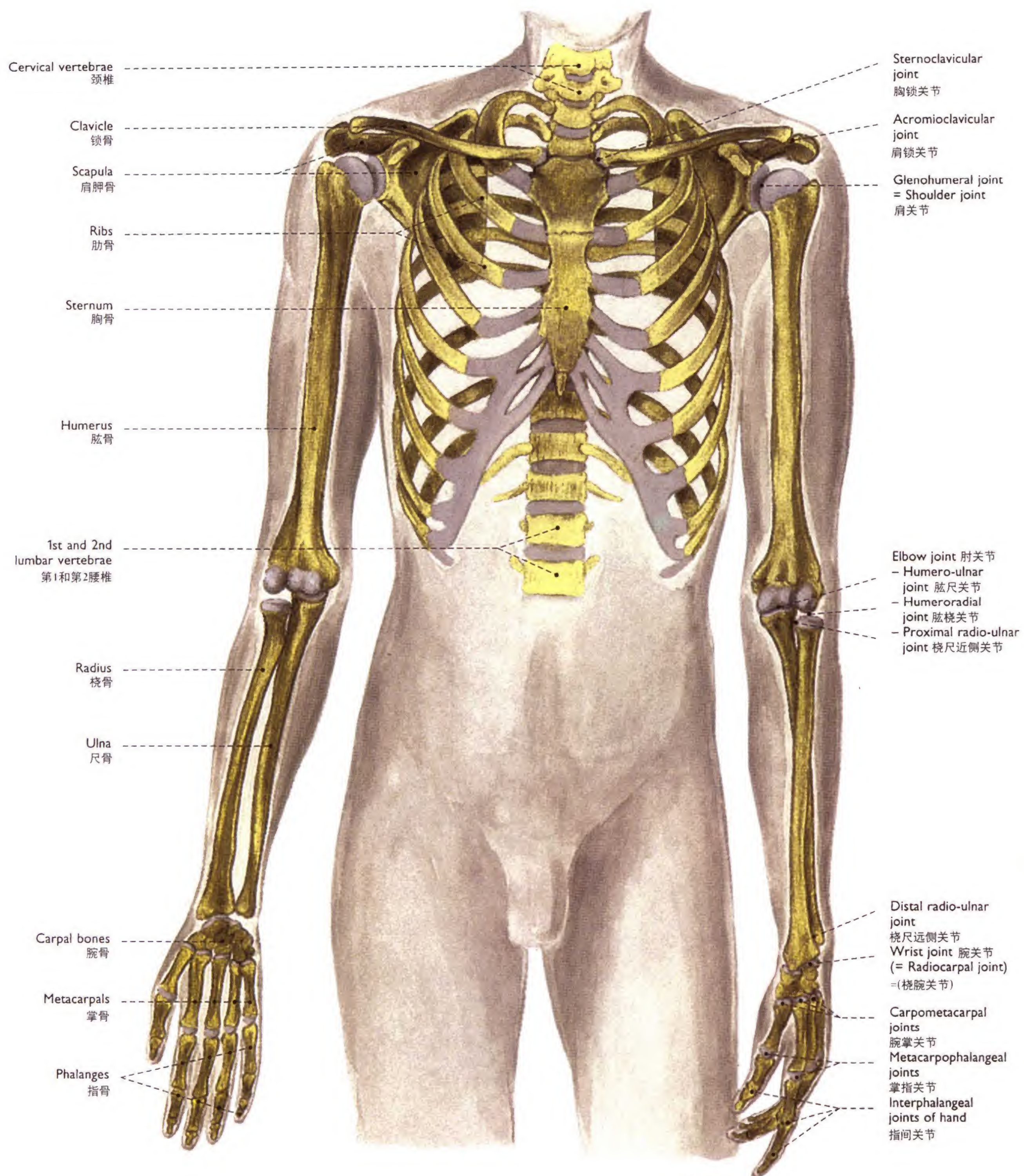


79 Head's zones Head's区

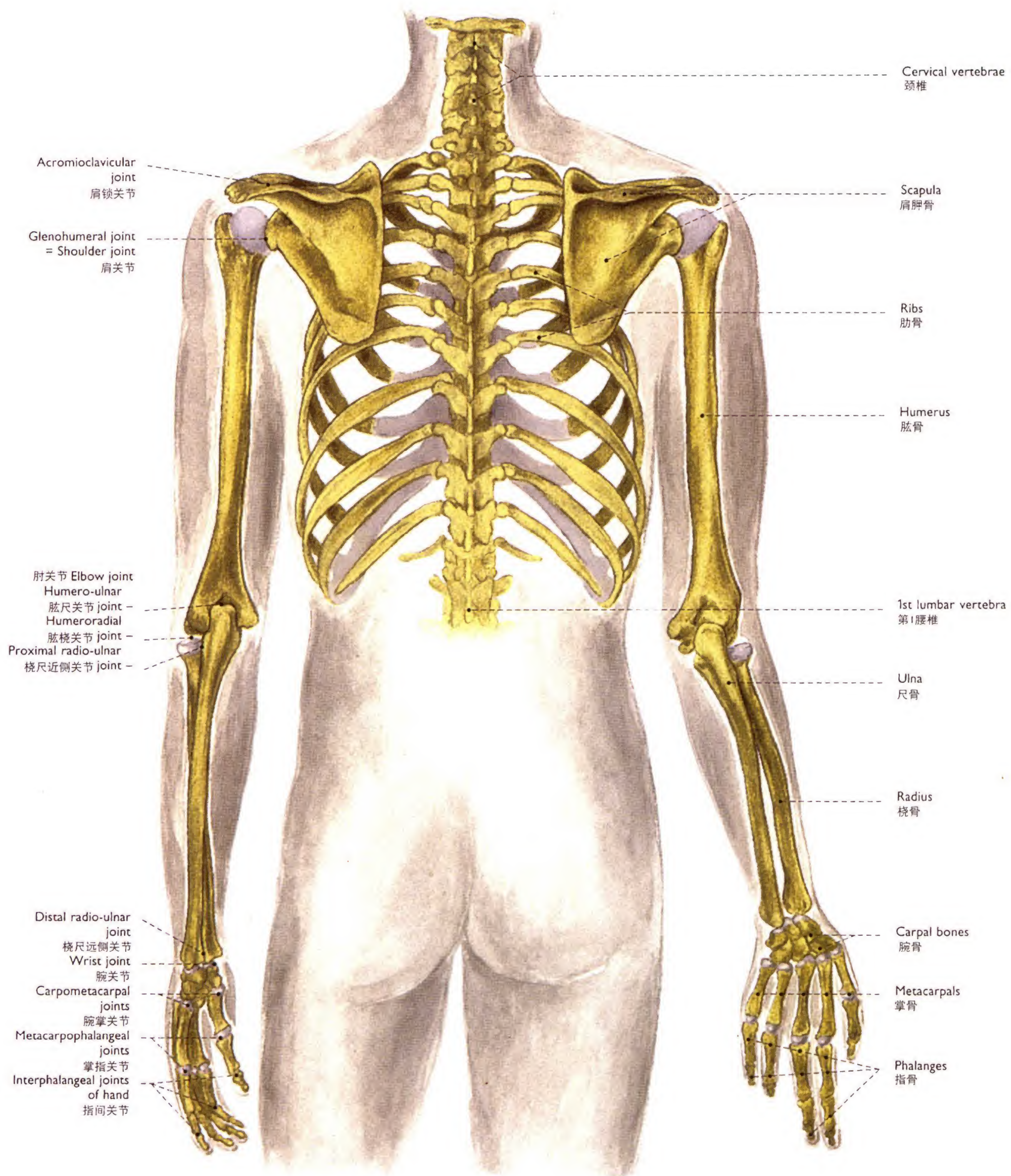
- a Zones of hyperalgesia of diverse inner organs at the body surface (20%) 内脏痛放散体表时，体表痛觉过敏区
- b Scheme of circuitry of the radiated pain (Head's zones) 放散性痛反射回路

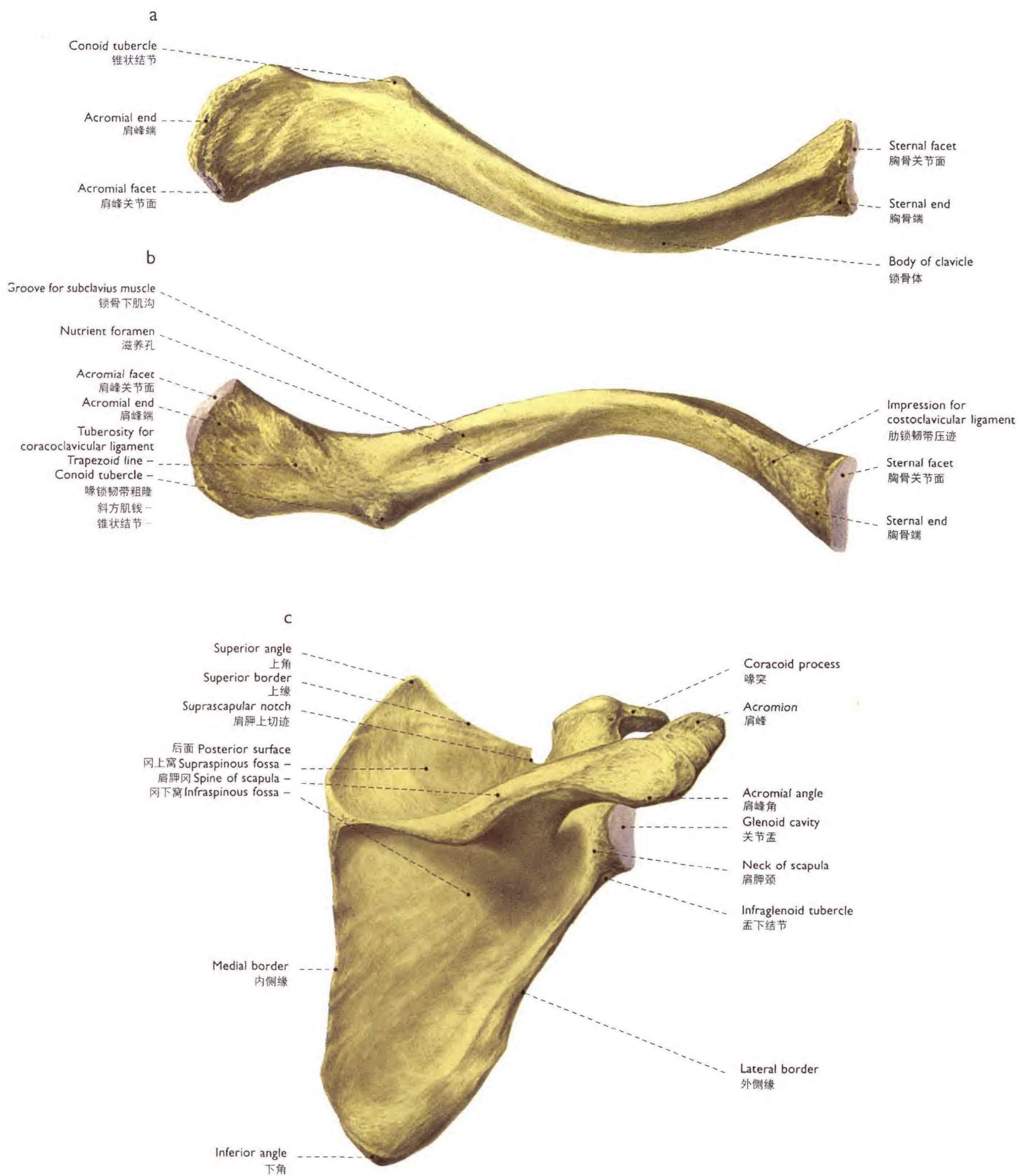
Upper Limb

上肢



82 Upper limbs and thorax (25%) 上肢和胸廓
Ventral aspect 前面观





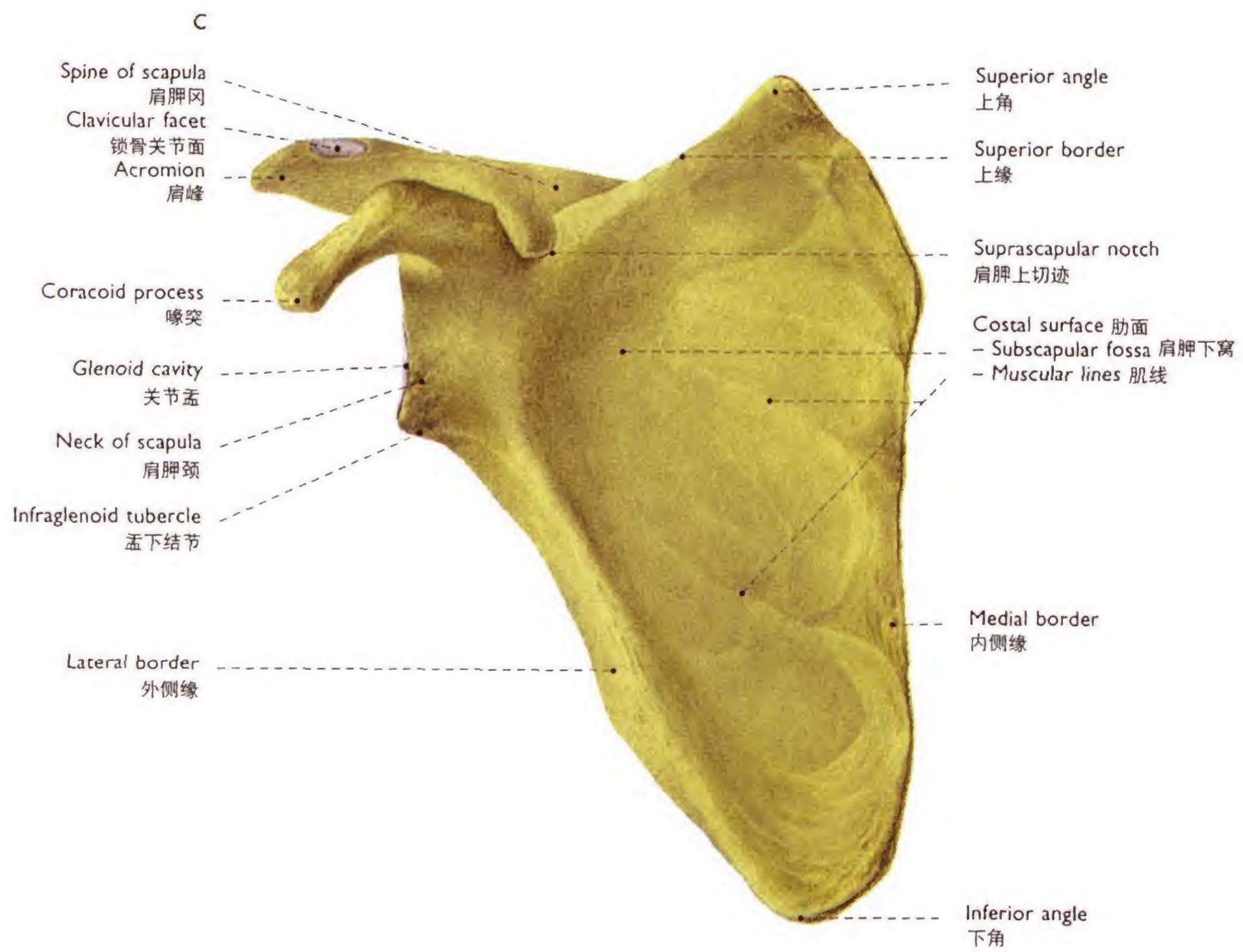
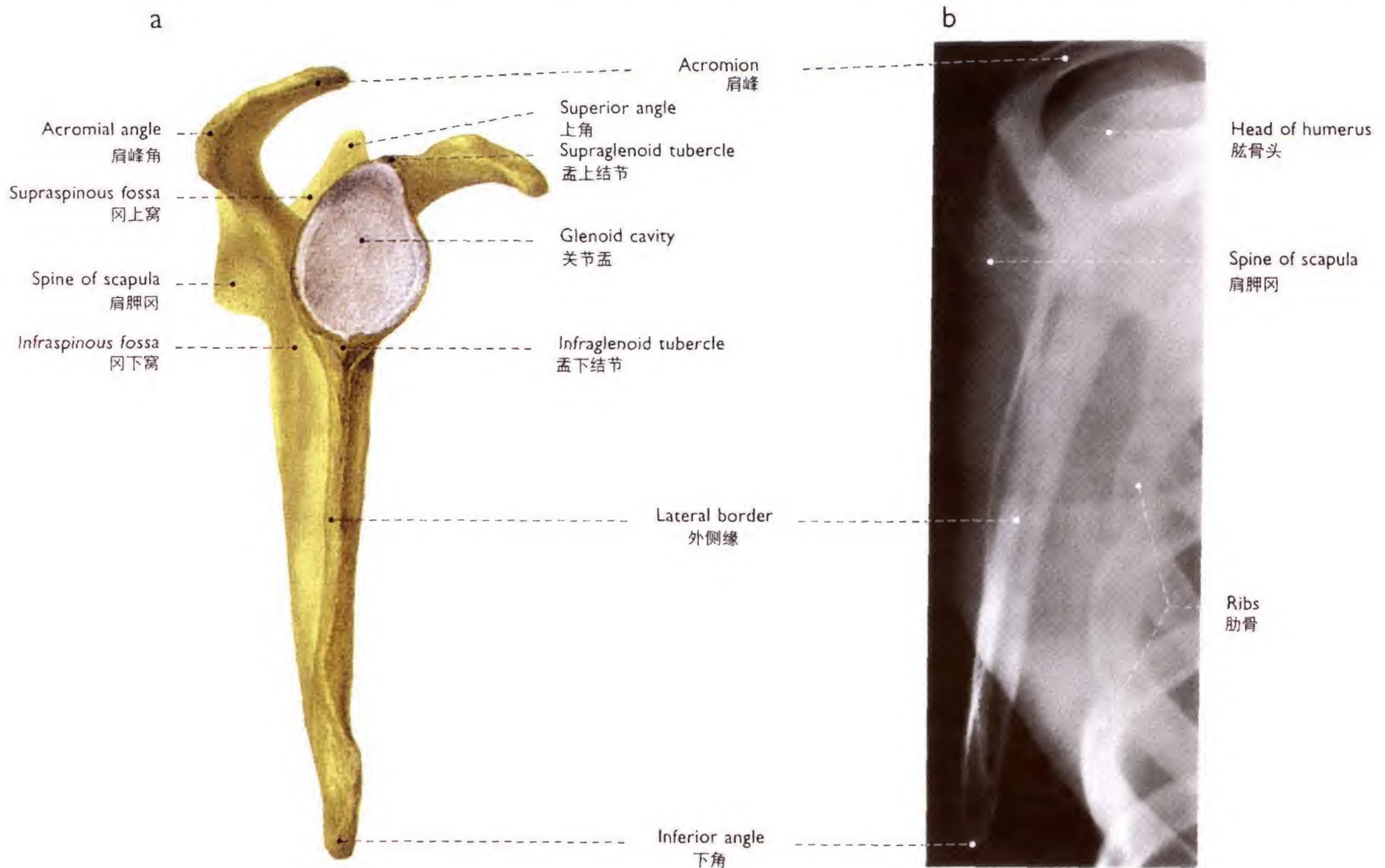
84 Pectoral (= shoulder) girdle 胸(=肩)带

a, b Right clavicle (90%) 右锁骨

a Superior aspect 上面观

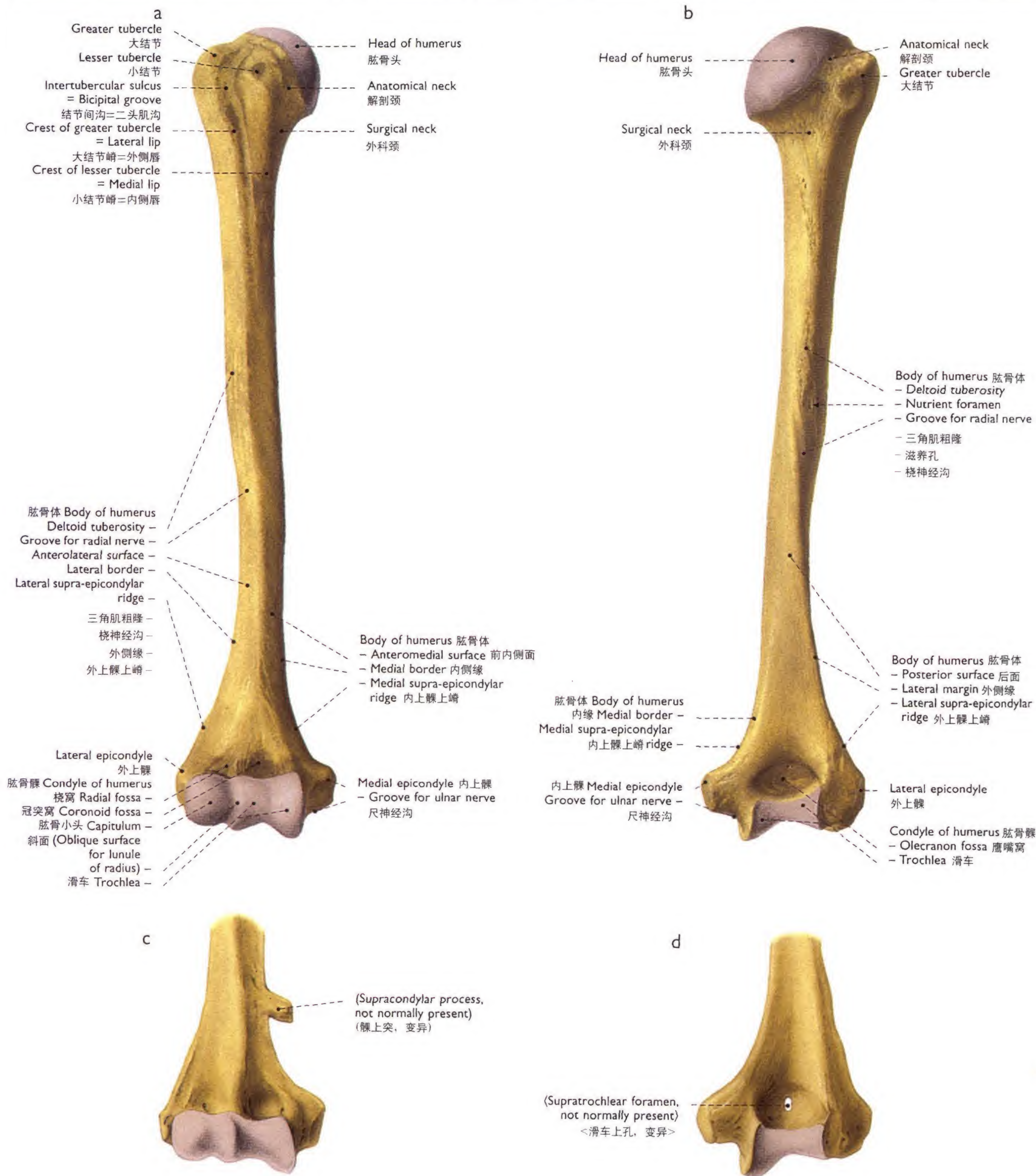
b Inferior aspect 下面观

c Right scapula (50%), dorsal aspect 右肩胛骨, 后面观



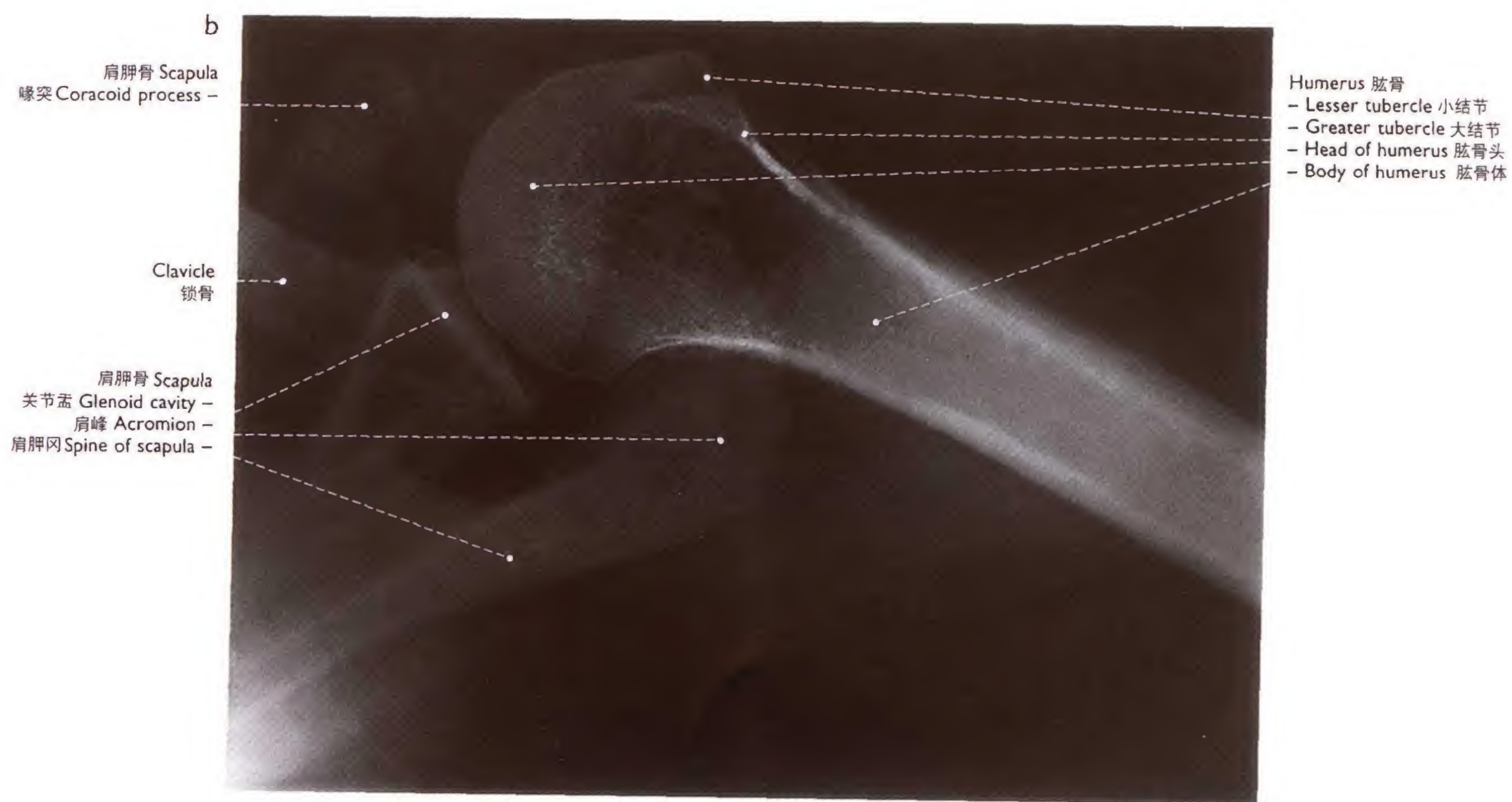
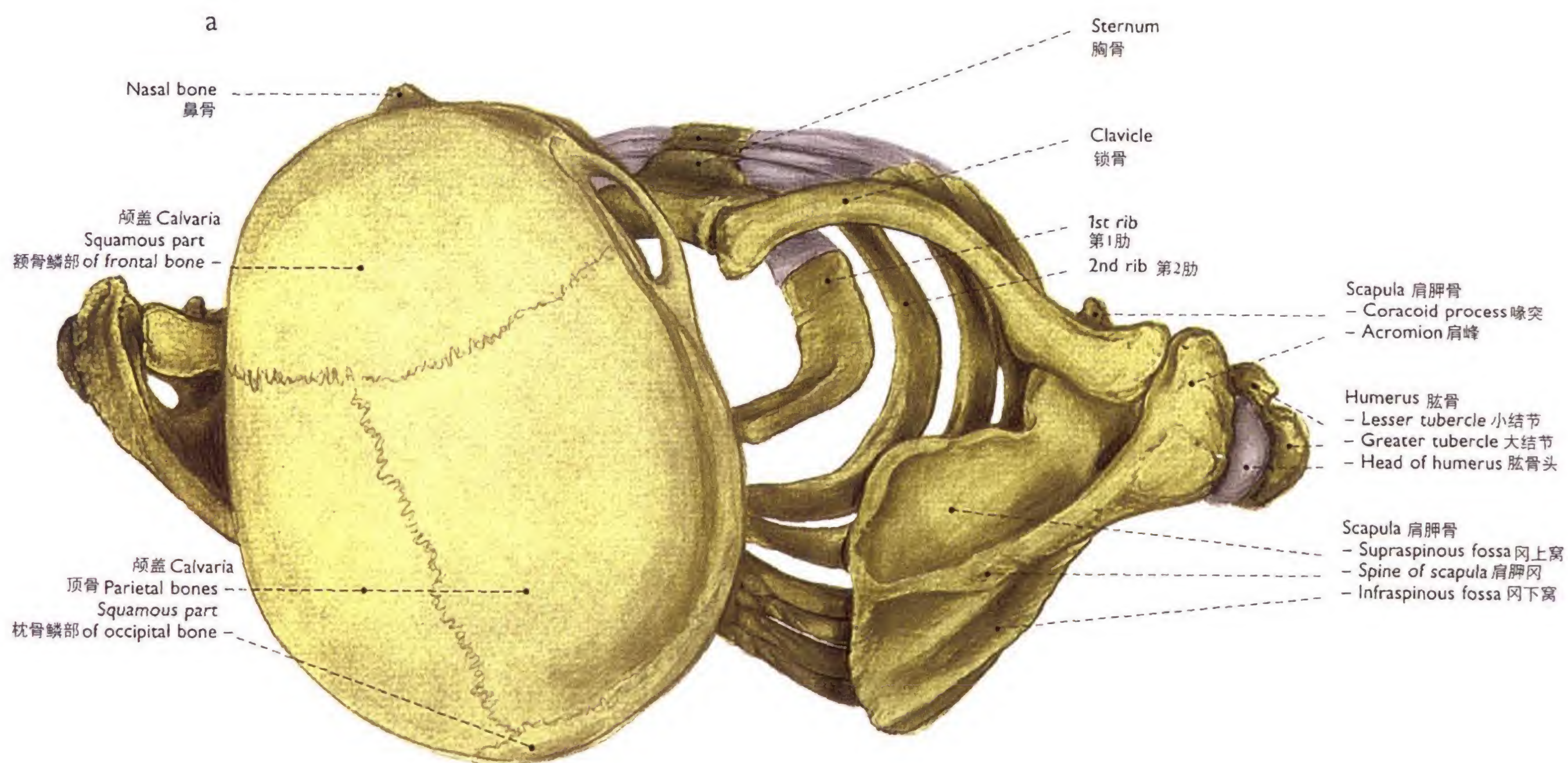
85 Right scapula (50%) 右肩胛骨

- a Lateral aspect 外侧面观
b Lateral radiograph 侧位X线图像
c Ventral aspect 前面观



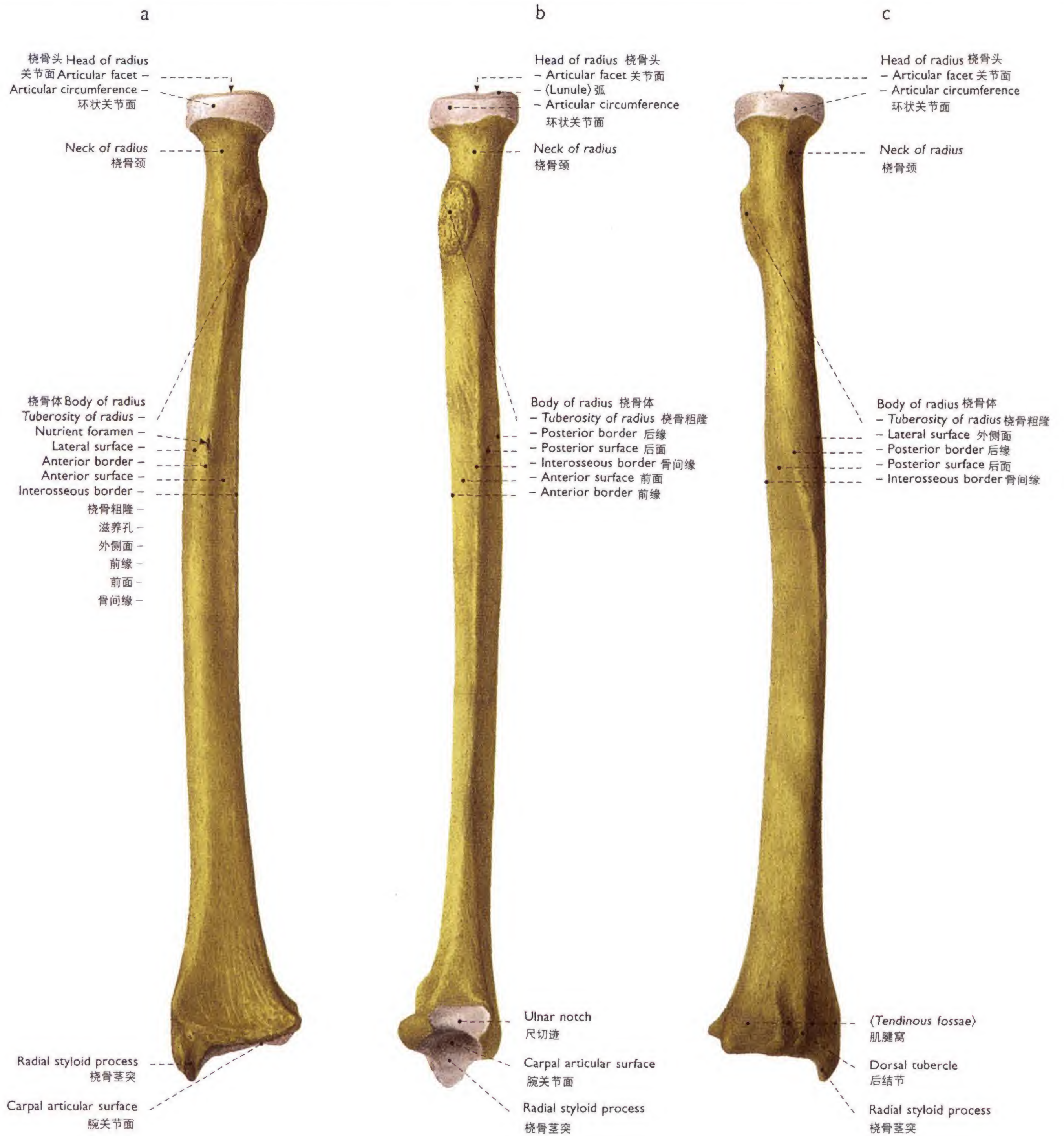
86 Right humerus (50%) 肱骨

- a Ventral aspect 前面观
 b Dorsal aspect 后面观
 c, d Distal part 远侧部
 c Ventral aspect 前面观
 d Dorsal aspect 后面观



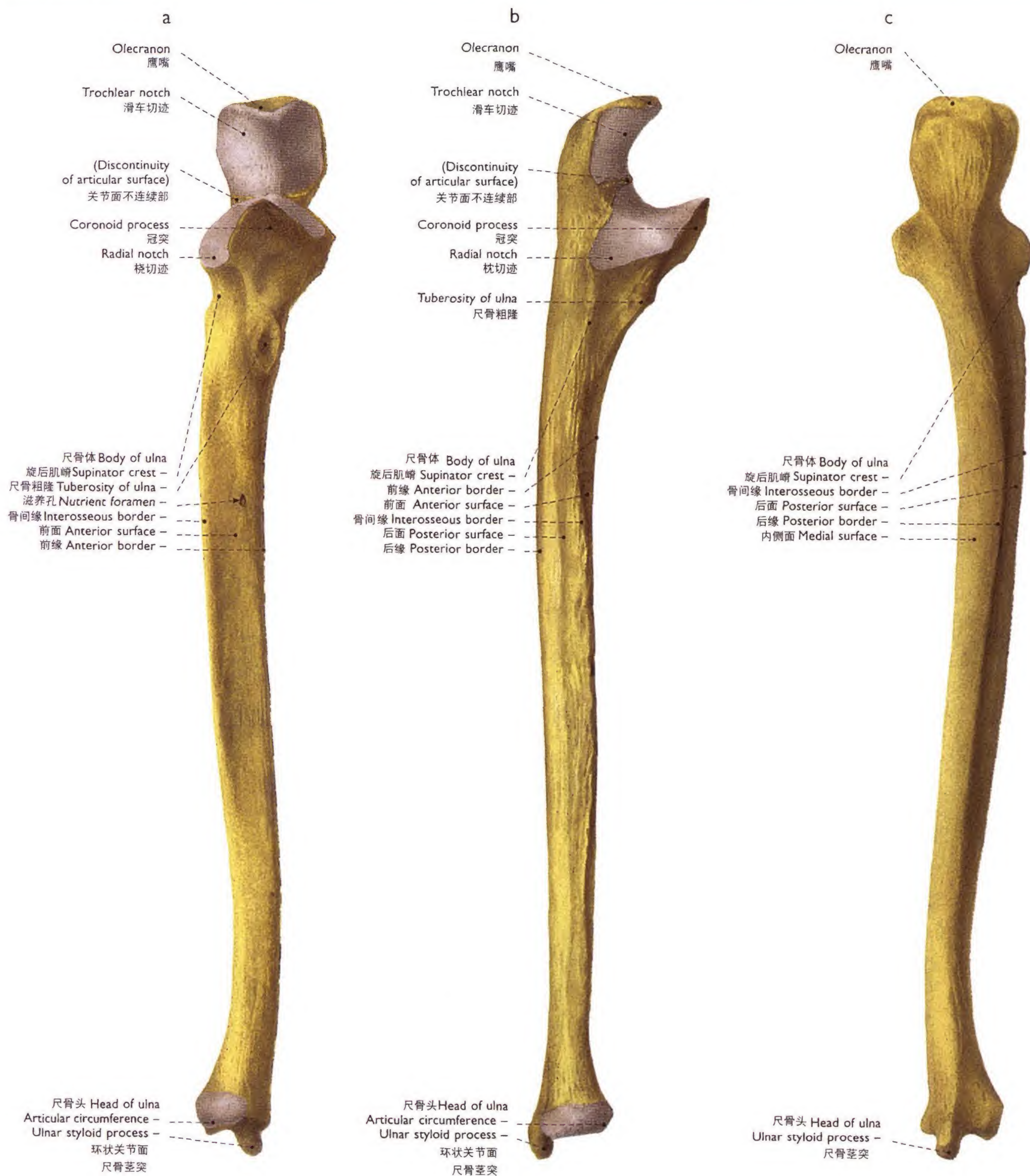
87 Right pectoral girdle and humerus 右肩带和肱骨

- a Superior aspect (45%) 上面观
b Supero-inferior radiograph 上下位X线图像



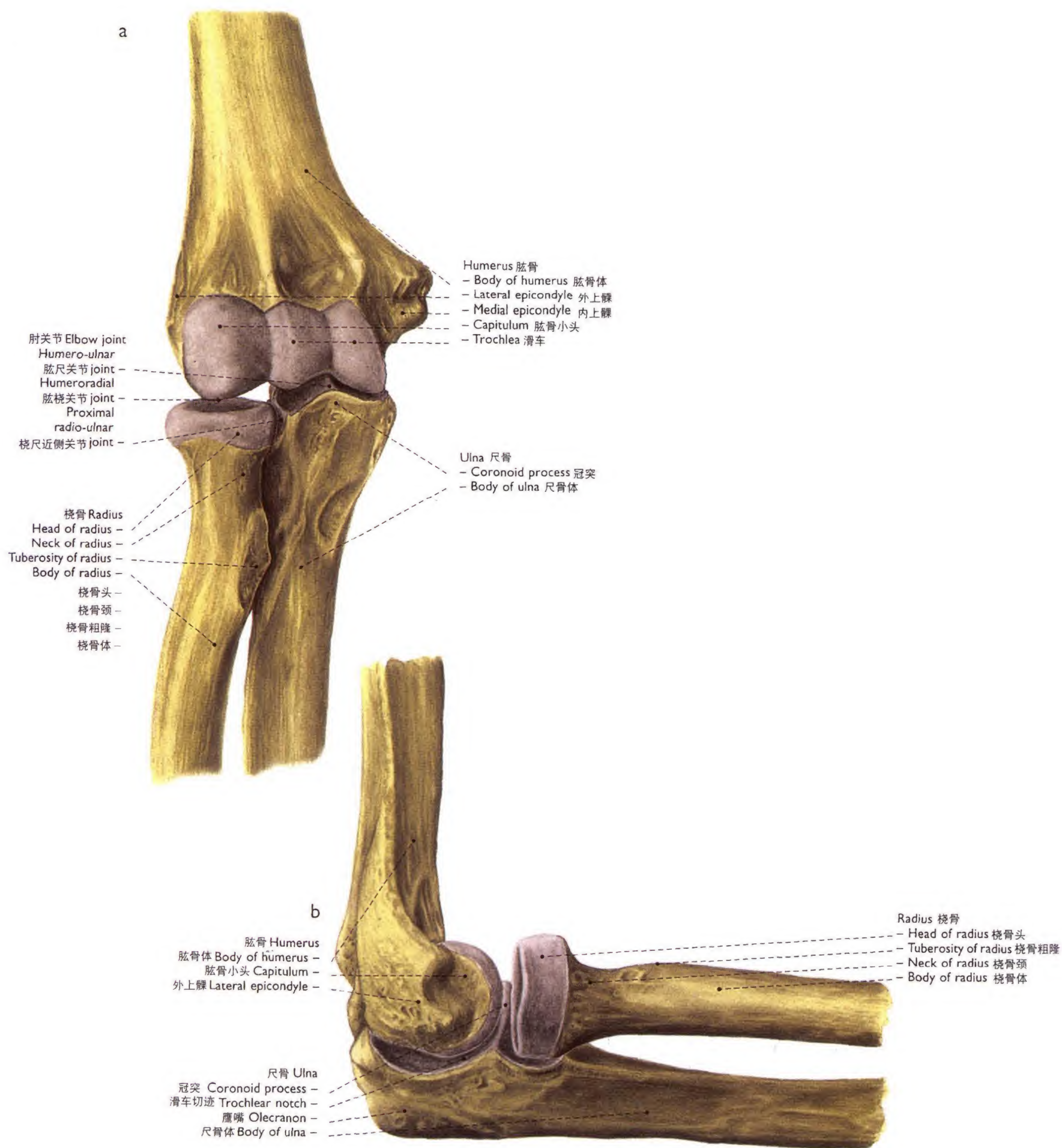
88 Right radius (70%) 右桡骨

- a Ventral aspect 前面观
b Medial aspect 内侧面观
c Dorsal aspect 后面观



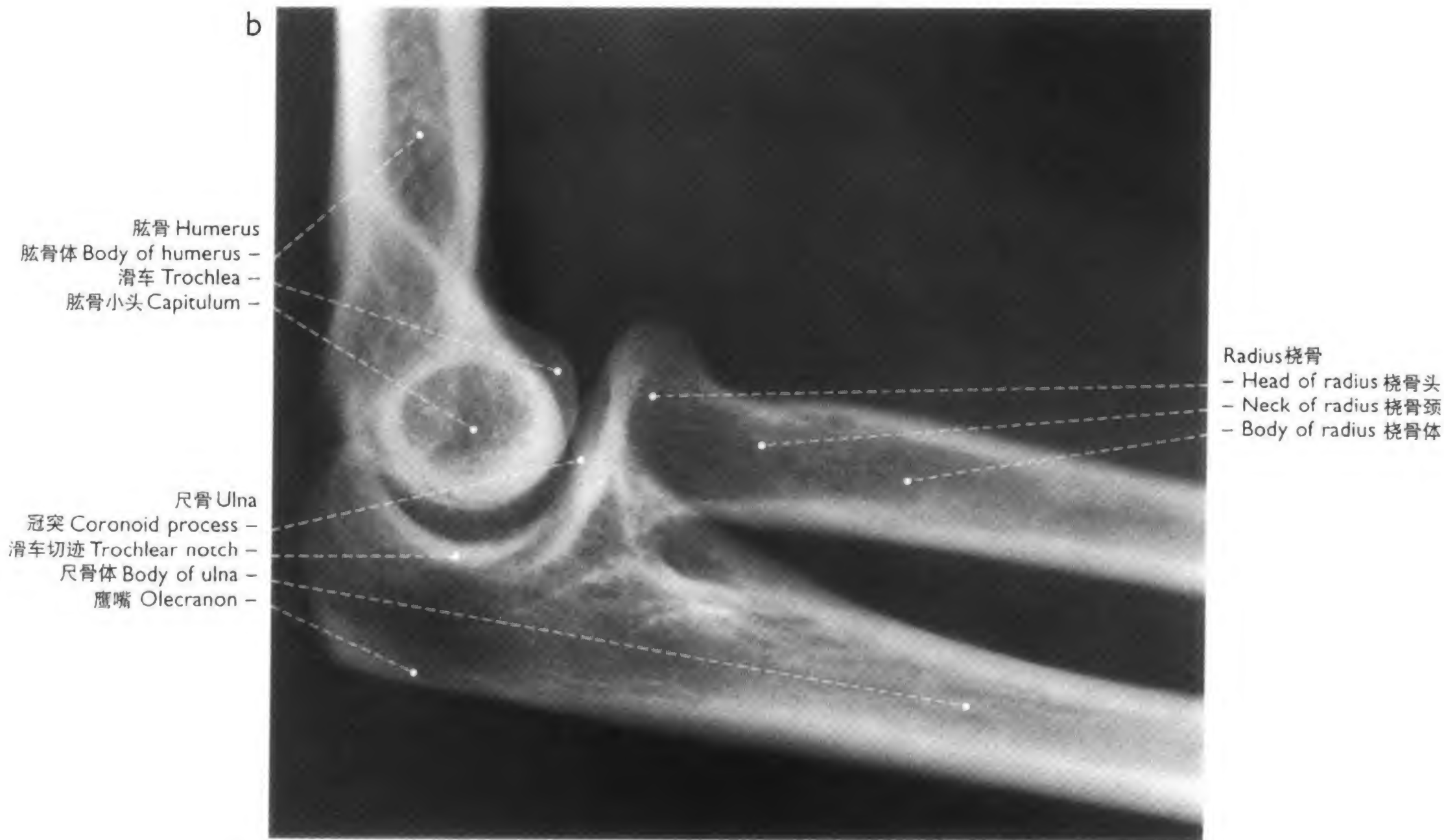
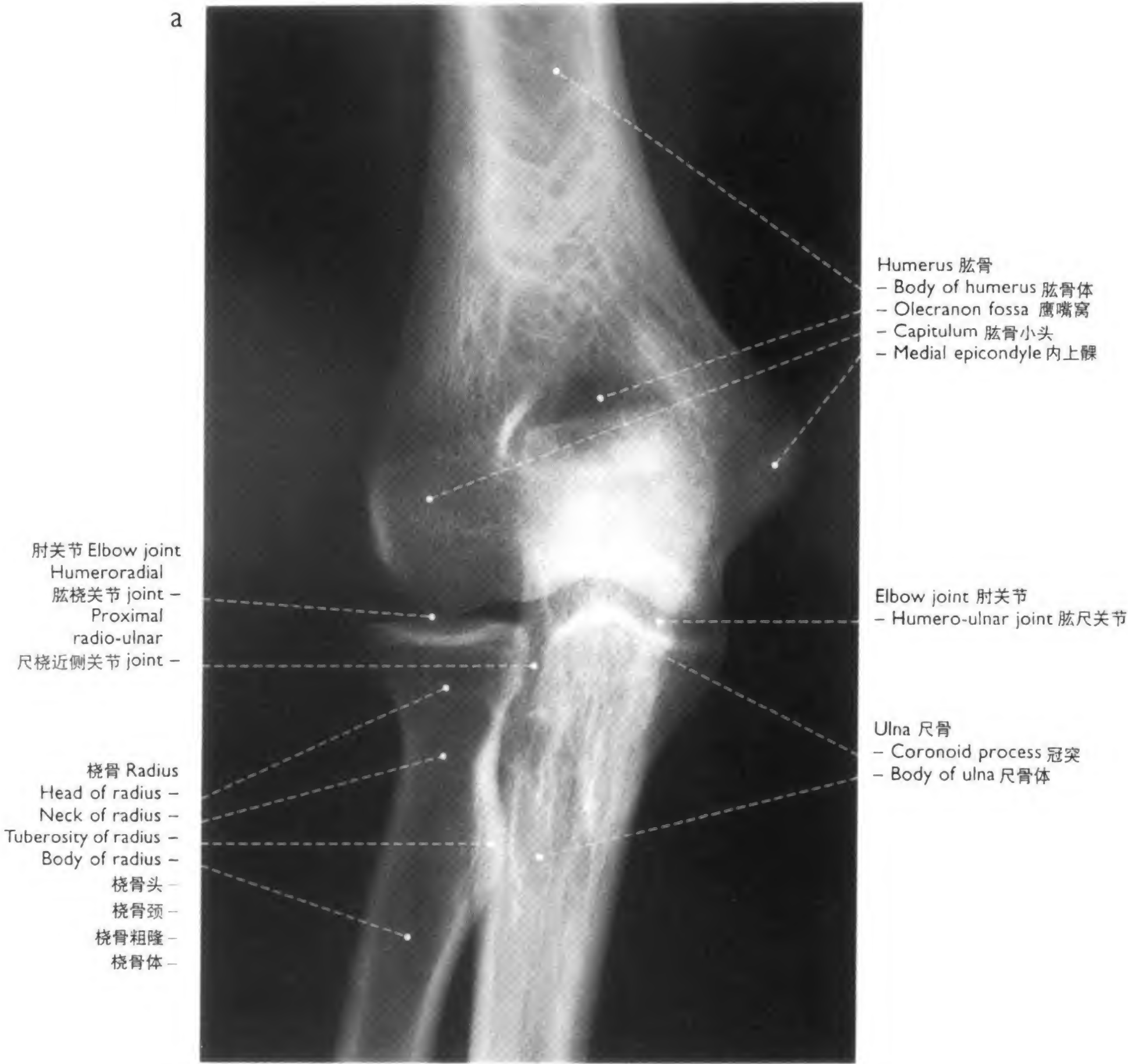
89 Right ulna (70%) 右尺骨

- a Ventral aspect 前面观
- b Lateral aspect 外侧面观
- c Dorsal aspect 后面观

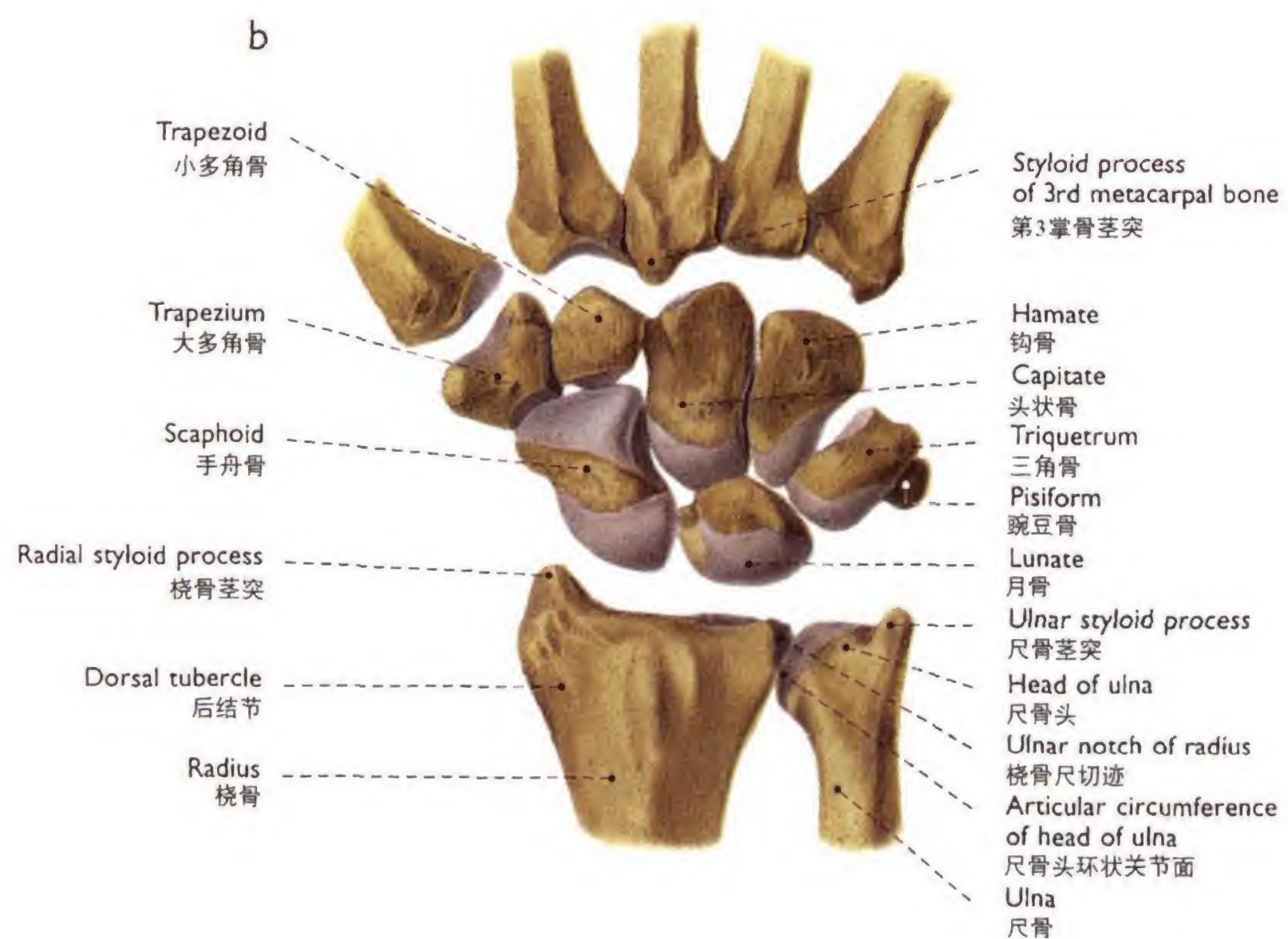
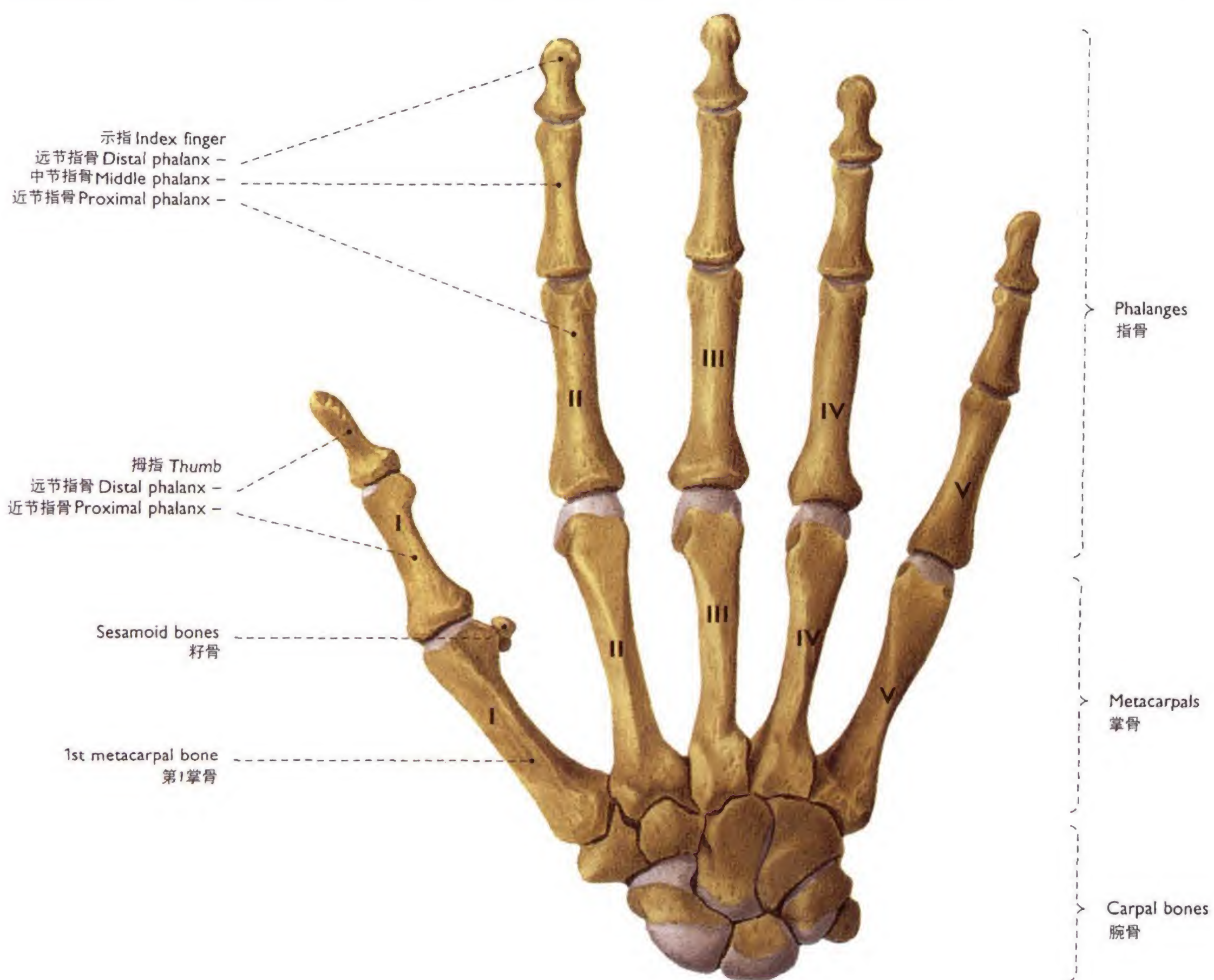


90 Bones of the right elbow joint (90%) 右肘关节骨

a Ventral aspect 前面观
 b Lateral (radial) aspect 外侧面(桡侧)观



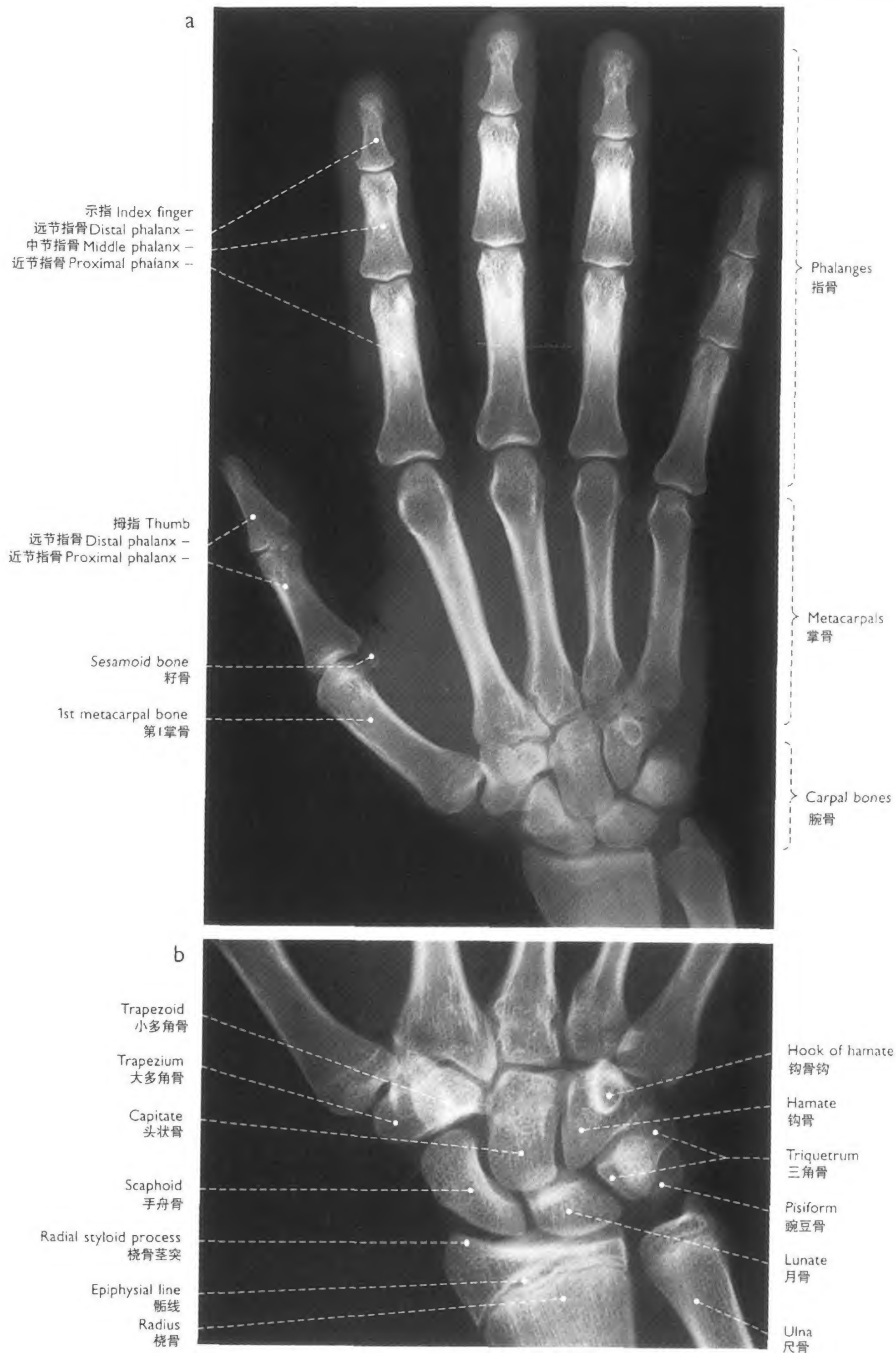
91 Right elbow joint (90%) 右肘关节
a Anteroposterior radiograph 前后位X线图像
b Radio-ulnar radiograph 桡尺位X线图像



92 Bones of the right hand 右手骨

a Dorsal aspect (60%) 后面观

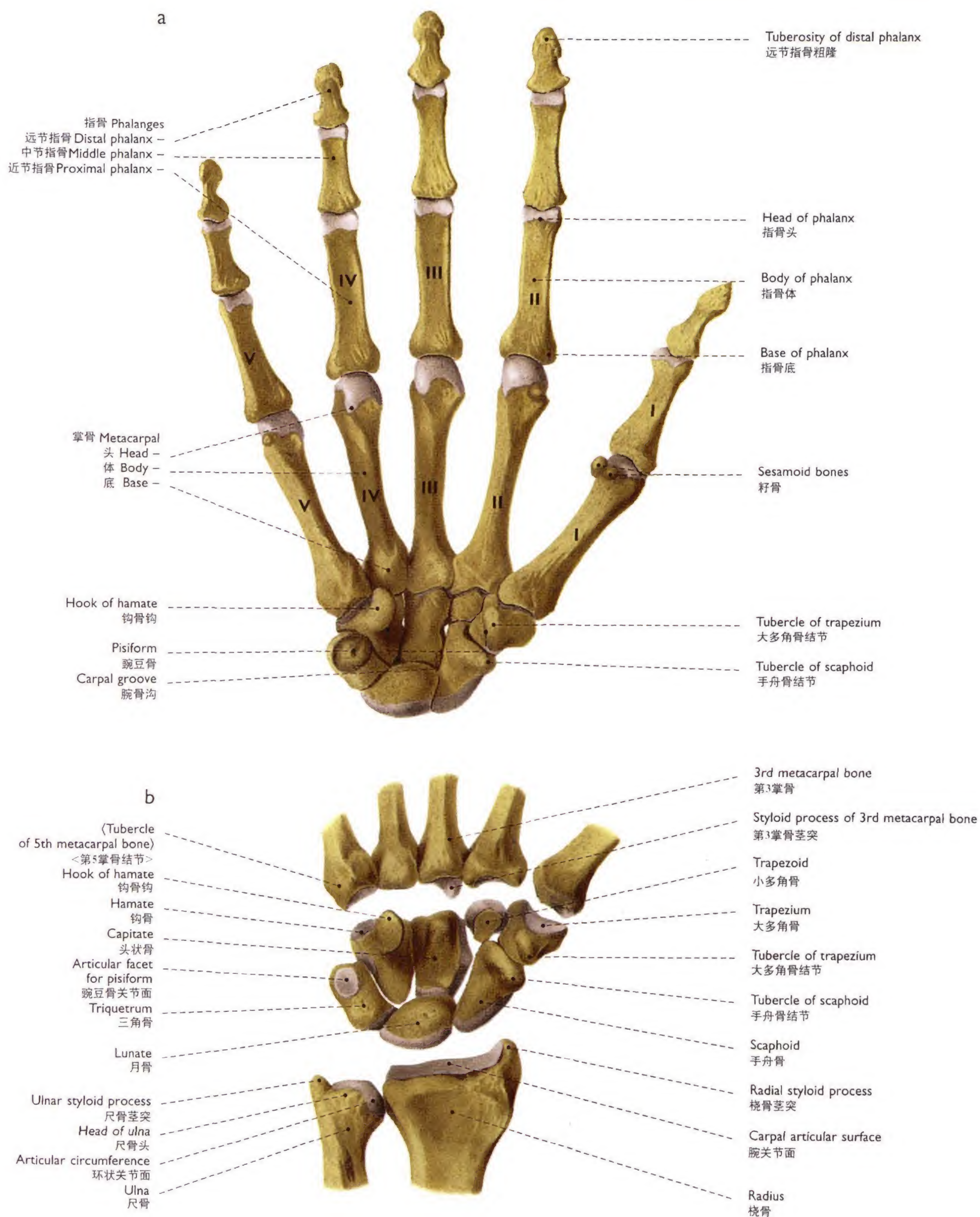
b Carpal bones (70%), dorsal aspect 腕骨、后面观



93 Bones of the right hand 右手骨

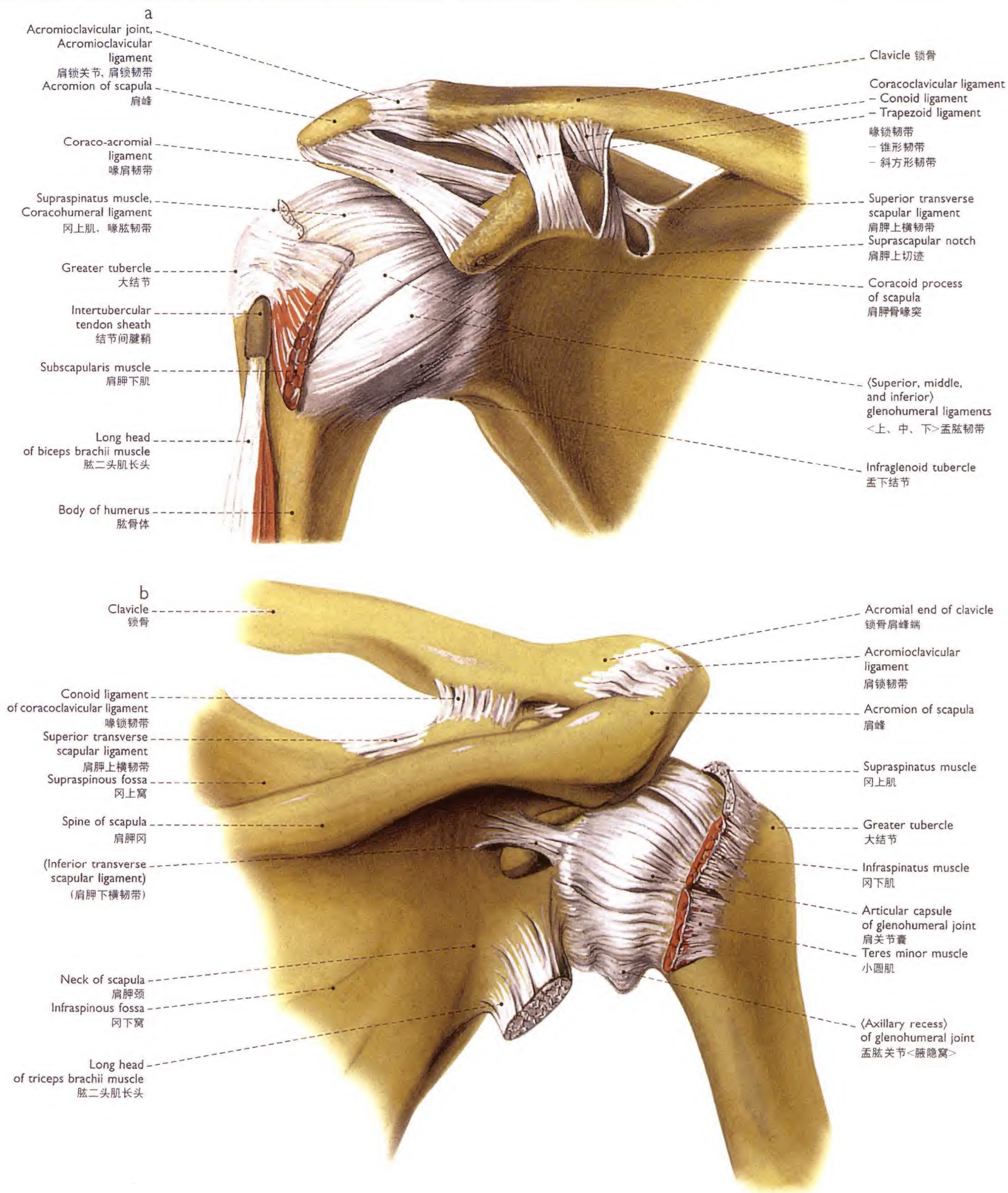
a Dorsopalmar radiograph (60%) 后前位X线图像

b Carpal bones (80%), dorsopalmar radiograph 腕骨, 后前位X线图像



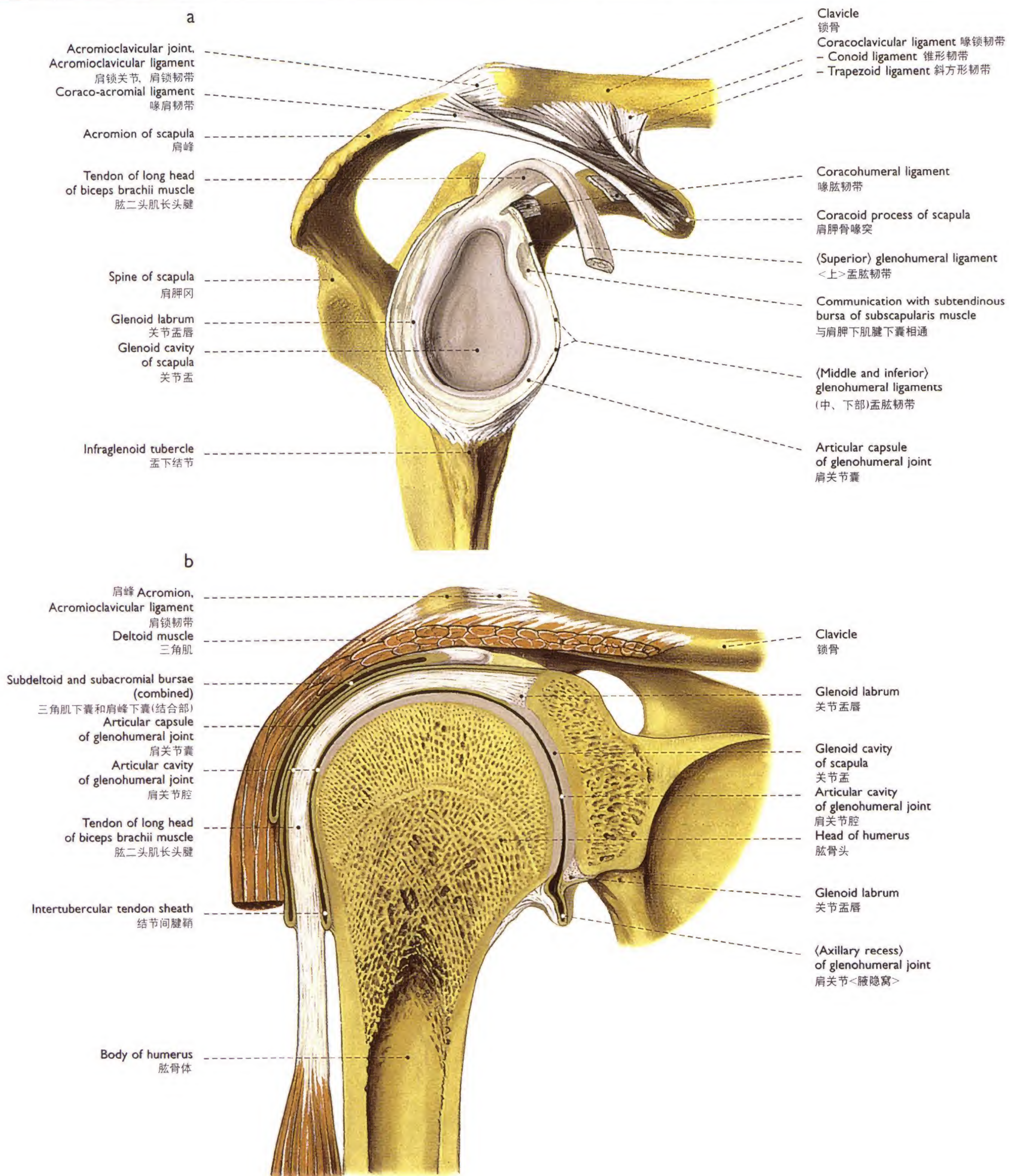
94 Bones of the right hand 右手骨

- a Palmar aspect (60%) 前面观
b Carpal bones (70%). The pisiform was removed.
Palmar aspect 腕骨, 豌豆骨去掉前面观



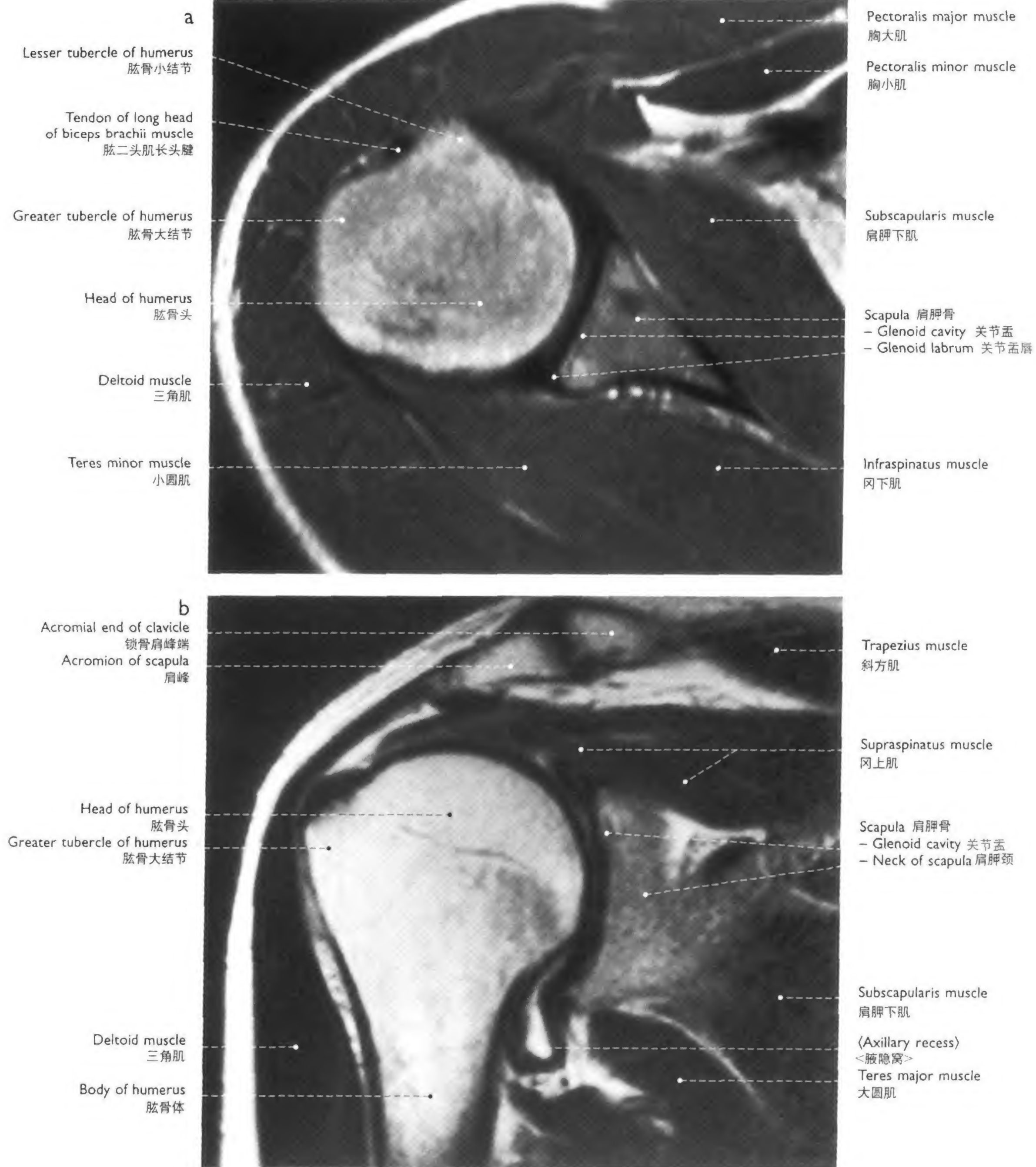
95 Right glenohumeral (= shoulder) joint (80%) 右孟肱(肩)关节

a Ventral aspect 前面观
b Dorsal aspect 后面观



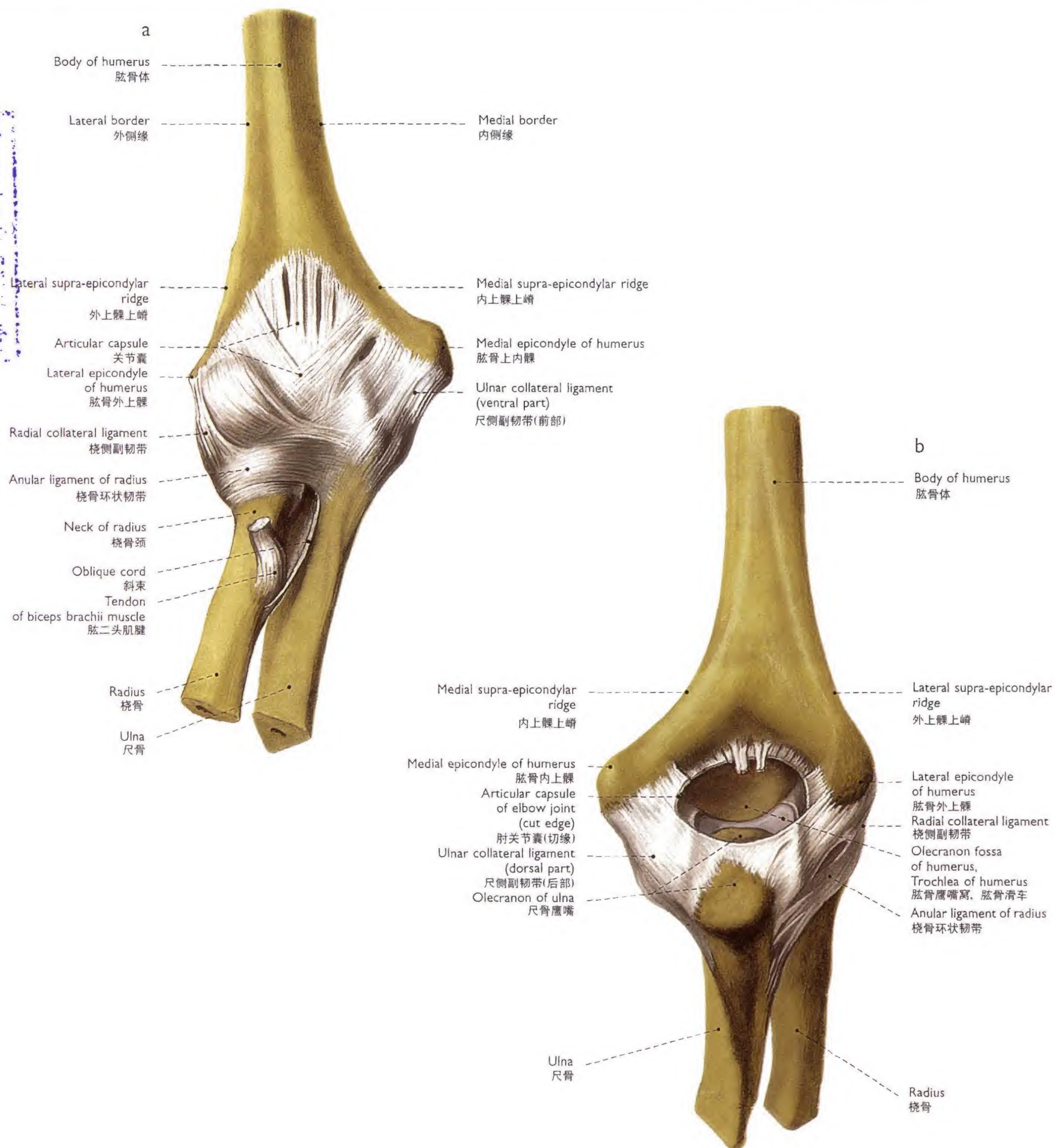
96 Right glenohumeral (= shoulder) joint (100%) 右孟肱(=肩)关节

- a Shoulder joint socket and supra-articular ligaments, lateral aspect 肩关节窝和关节上韧带, 外侧面观
b Frontal section, ventral aspect 冠状切面, 前面观



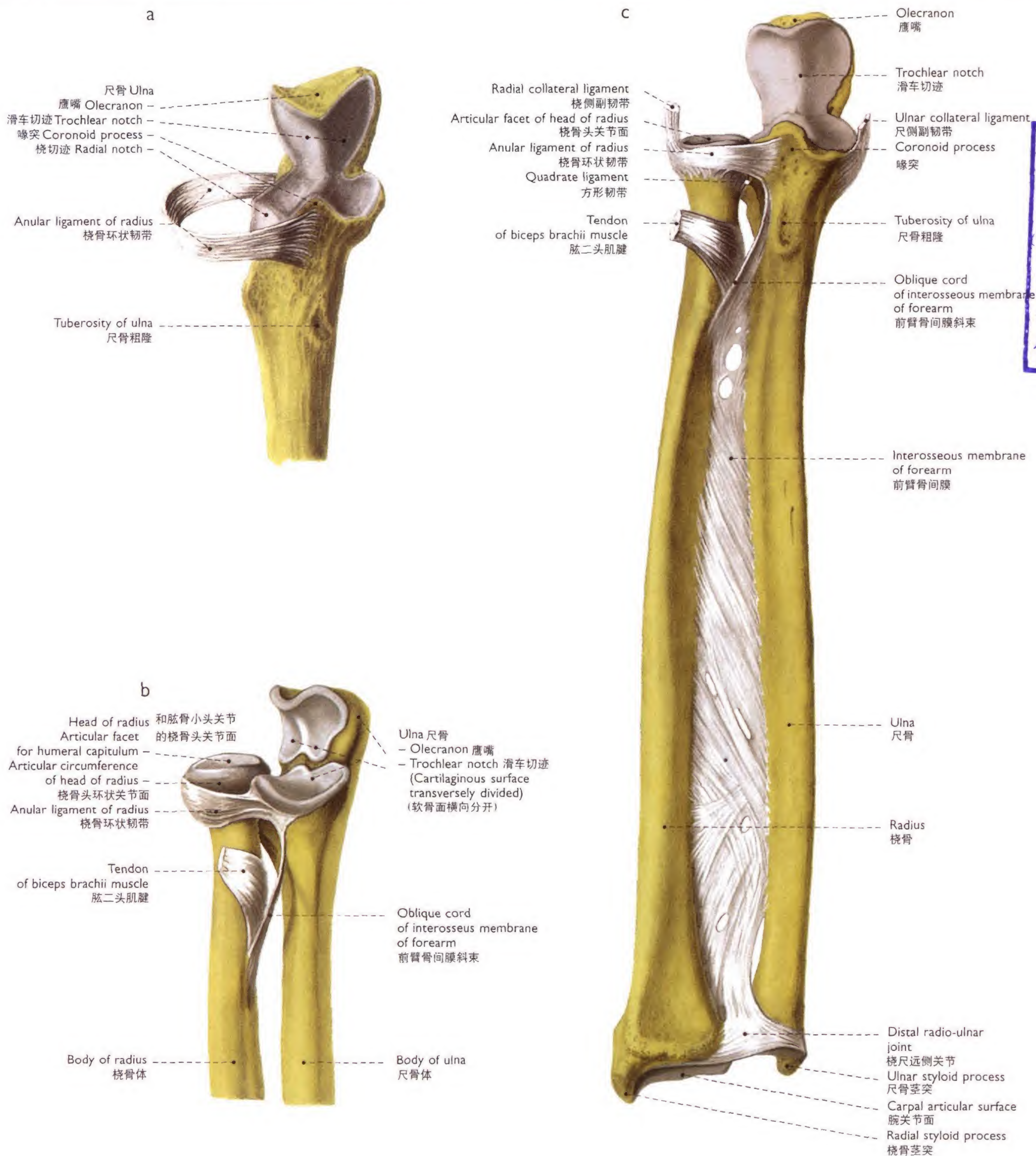
97 Right glenohumeral (= shoulder) joint (100%) 右孟肱(=肩)关节

- a Transverse magnetic resonance image (MRI, T₂-weighted),
inferior aspect 磁共振横断层图像(MRI, T₂加权), 下面观
- b Coronal magnetic resonance image (MRI, T₂-weighted),
ventral aspect 磁共振冠状断层图像(MRI, T₂加权), 前面观



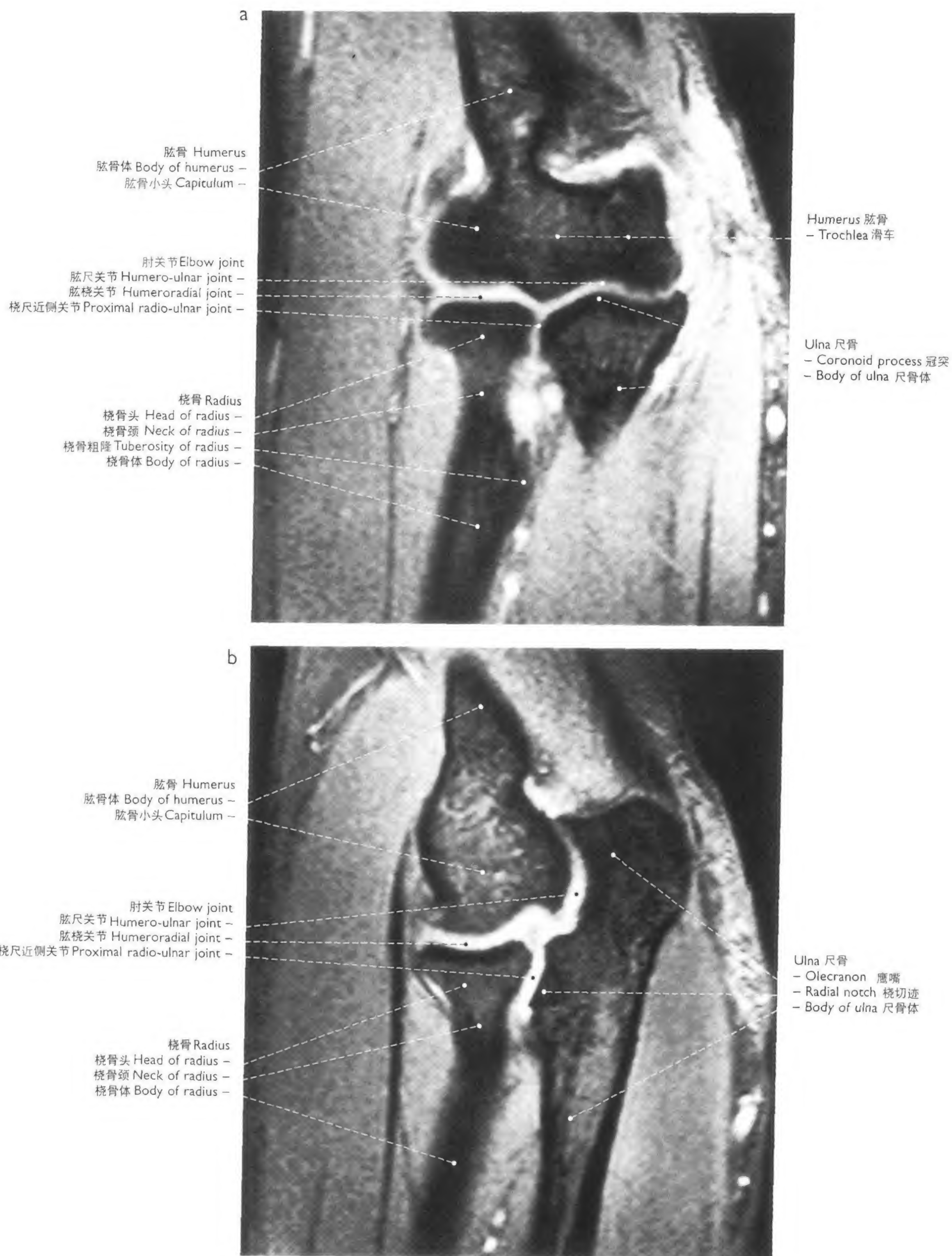
98 Right elbow joint (85%) 右肘关节

a Ventral aspect 前面观
b Dorsal aspect 后面观



99 Radio-ulnar joints of the right forearm 右前臂桡尺关节

- a Proximal end of ulna and annular ligament of radius (80%),
ventral aspect 尺骨上端和桡骨环状韧带, 前面观
- b Proximal radio-ulnar joint (70%), ventral aspect 桡尺近侧关节, 前面观
- c Forearm bones in supinated position (70%), ventral aspect 旋后位前臂骨, 前面观



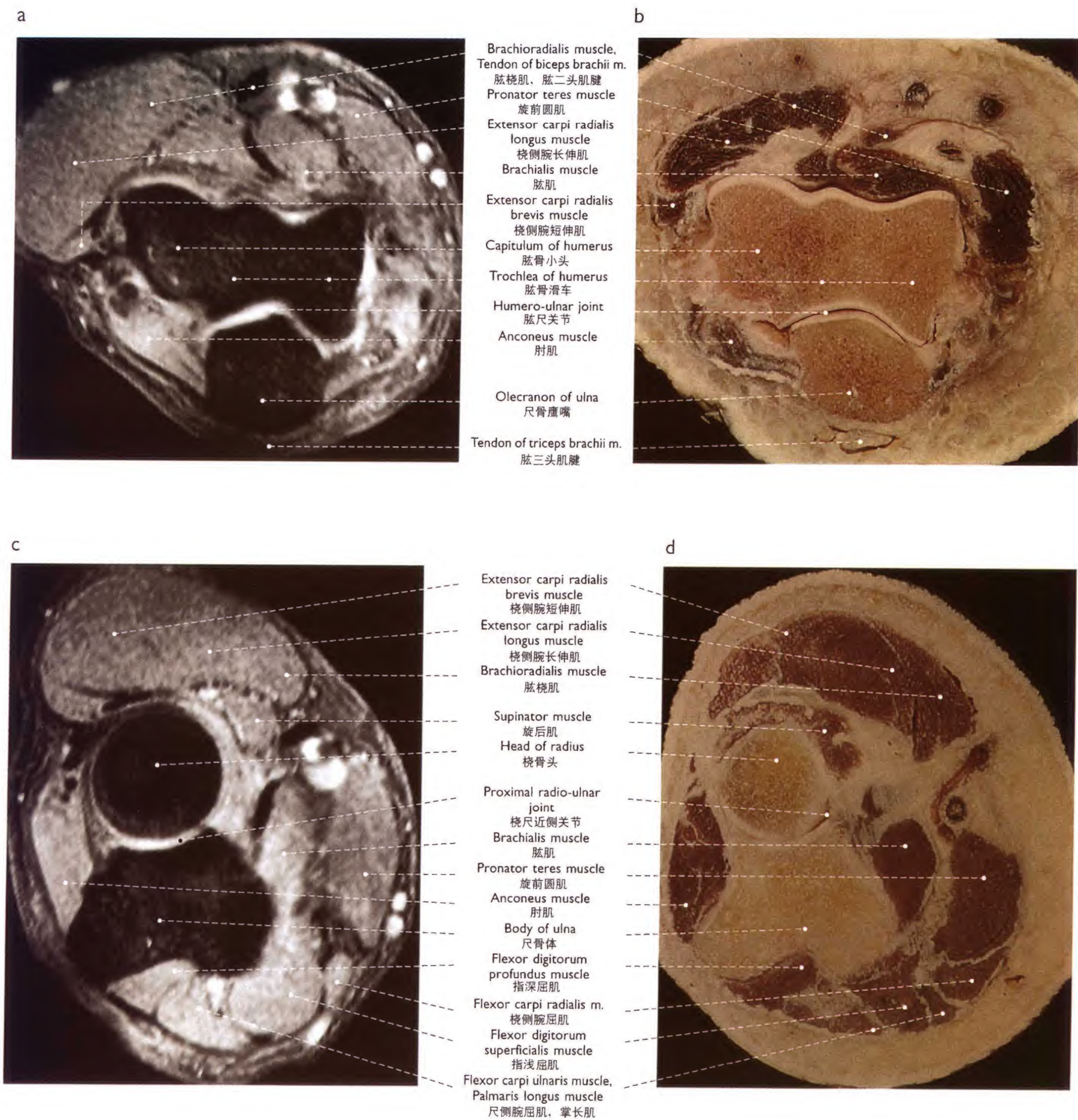
100 Right elbow joint (100%) 右肘关节

Coronal magnetic resonance images (MRI, T₂-weighted) 磁共振冠状位图像(MRI,T₂加权)

a through the ventral part 经肘关节前部

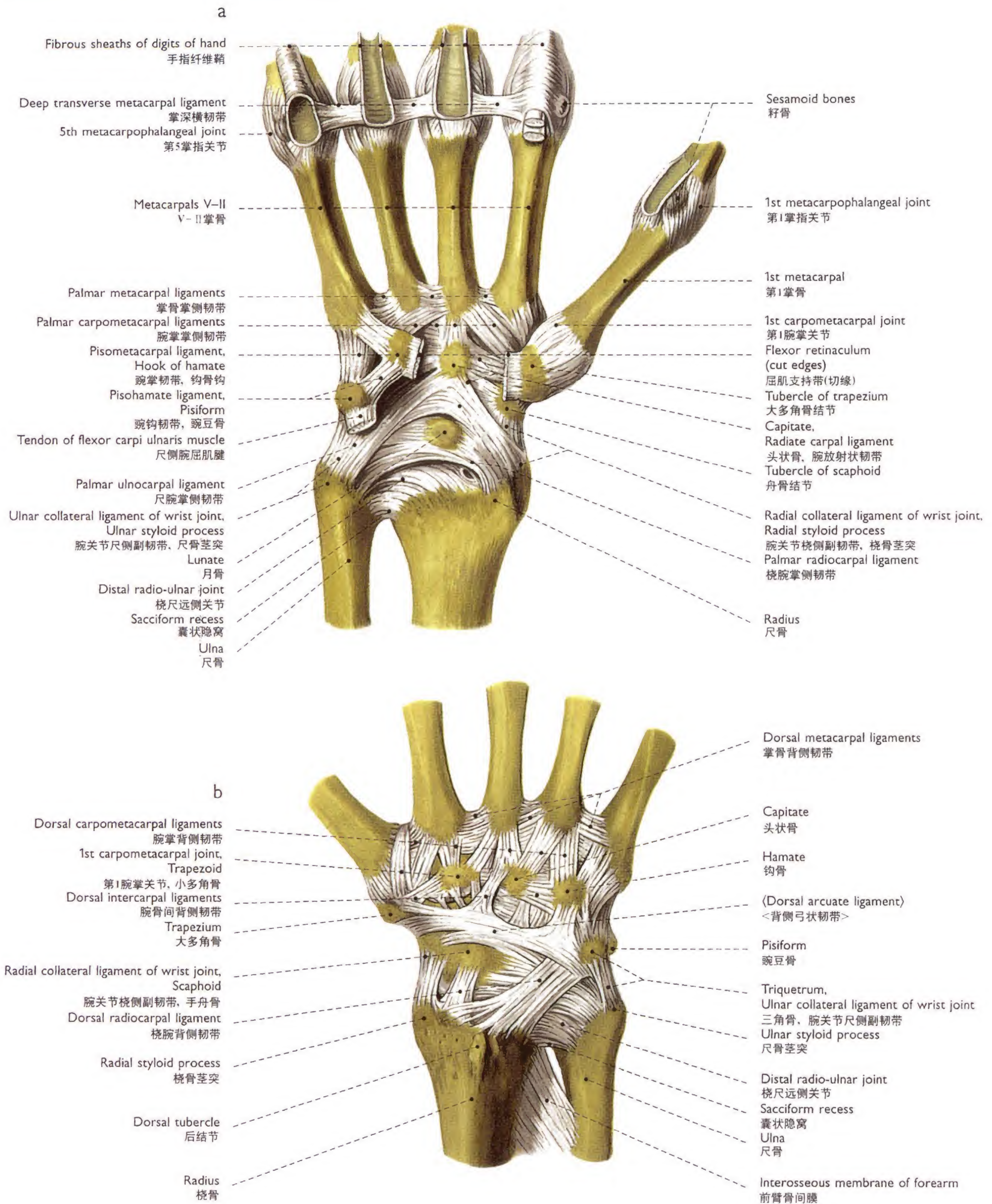
b through the dorsal part

of the elbow joint, ventral aspect 经肘关节后部, 前面观



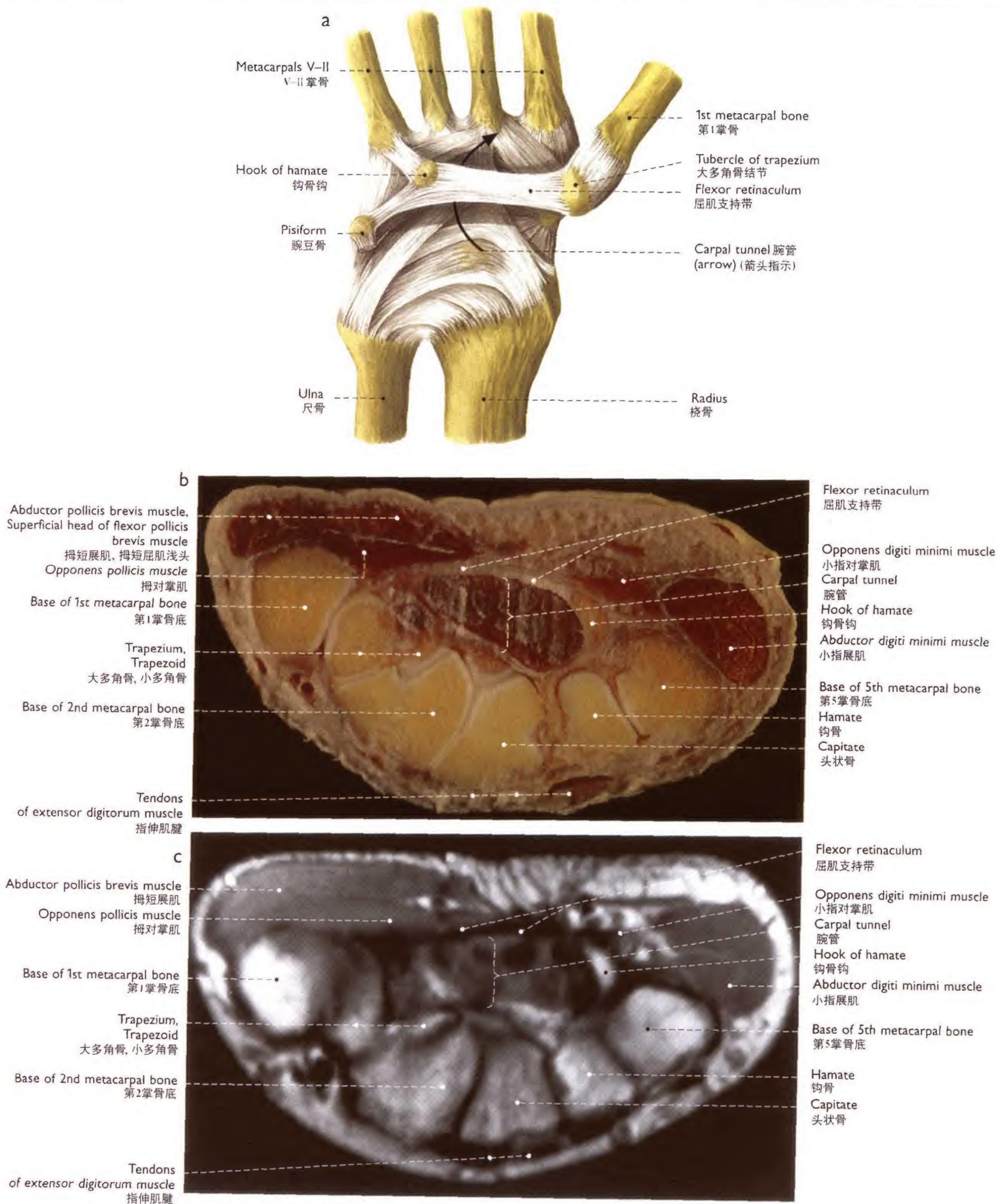
101 Right elbow joint (90°) 右肘关节

- a, b Transverse sections through the distal arm and the humero-ulnar joint 经臂下端和肘关节横断面
c, d Transverse sections through the proximal forearm and the proximal radio-ulnar joint 经前臂上端和桡尺近侧关节横断面
a, c Magnetic resonance images (MRI, T₂-weighted), distal aspect 磁共振图像(MRI, T₂加权)远侧观
b, d Anatomical sections, distal aspect
The pictures c and d are rotated by about 90° in relation to a and b. 解剖断面, 下面观。将 c, d 图旋转 90° 和 a, b 图方向相当



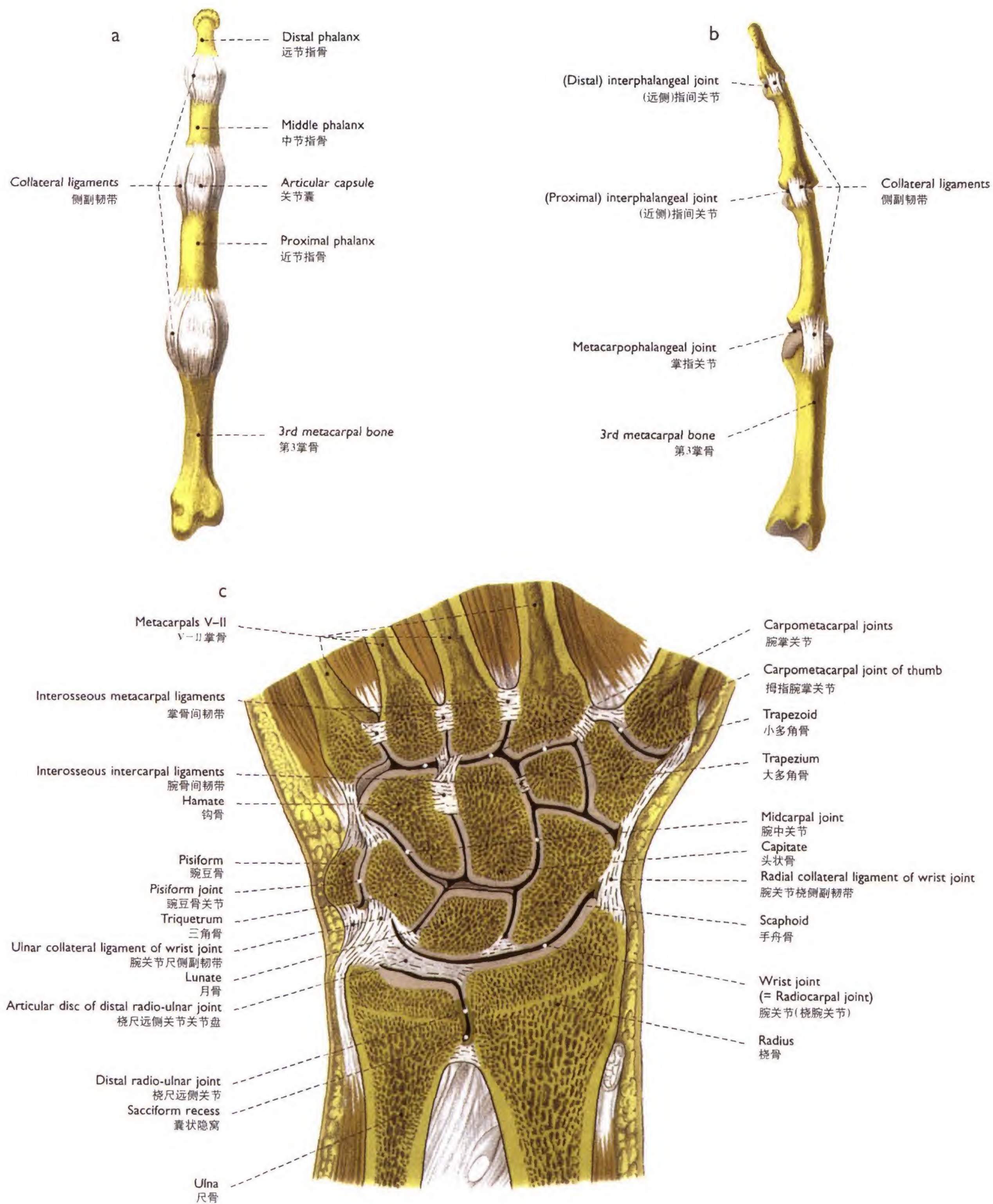
102 Joints of the right hand (75%) 右手关节

a Palmar aspect 前面观
b Dorsal aspect 后面观



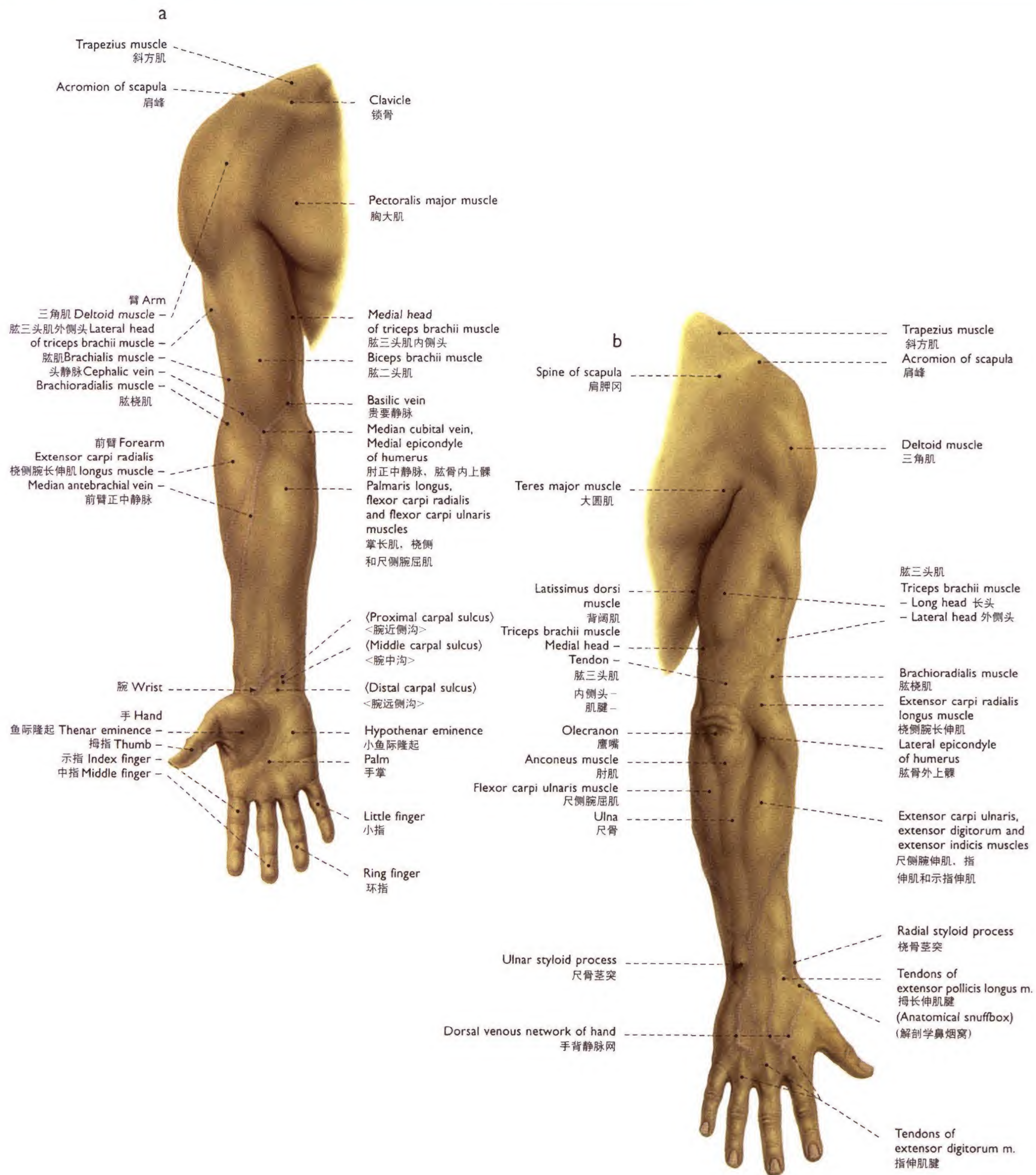
103 Carpal tunnel of the right hand 右手腕管

- a Palmar aspect (80%) 前面观
- b Anatomical section through the wrist and the carpal tunnel (130%),
distal aspect 经腕和腕管的解剖断面、下面观
- c Transverse magnetic resonance image (MRI, T₁-weighted) of the wrist and the carpal tunnel (140%), distal aspect (MRI, T₁加权)下面观
- b, c Hand in full supination 手全旋前位



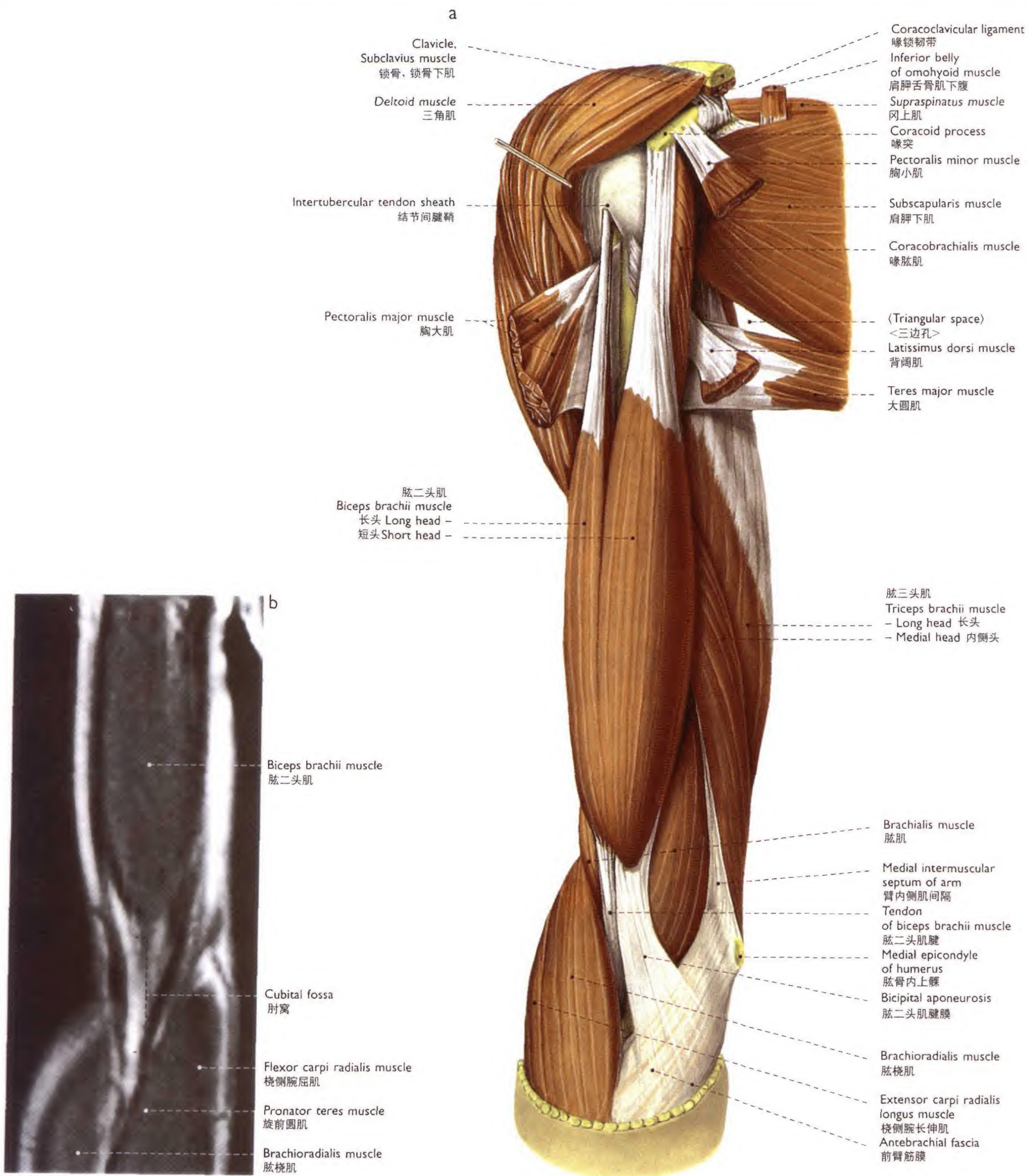
104 Joints of the right hand 右手关节

- a, b Middle finger (60%) 中指
- a Dorsal aspect 后面观
- b Lateral aspect 侧面观
- c Radio-ulnar cut through the wrist (100%), palmar aspect 经腕关节桡尺冠状切面, 前面观



105 Surface anatomy of the right upper limb (20%) 右上肢表面解剖

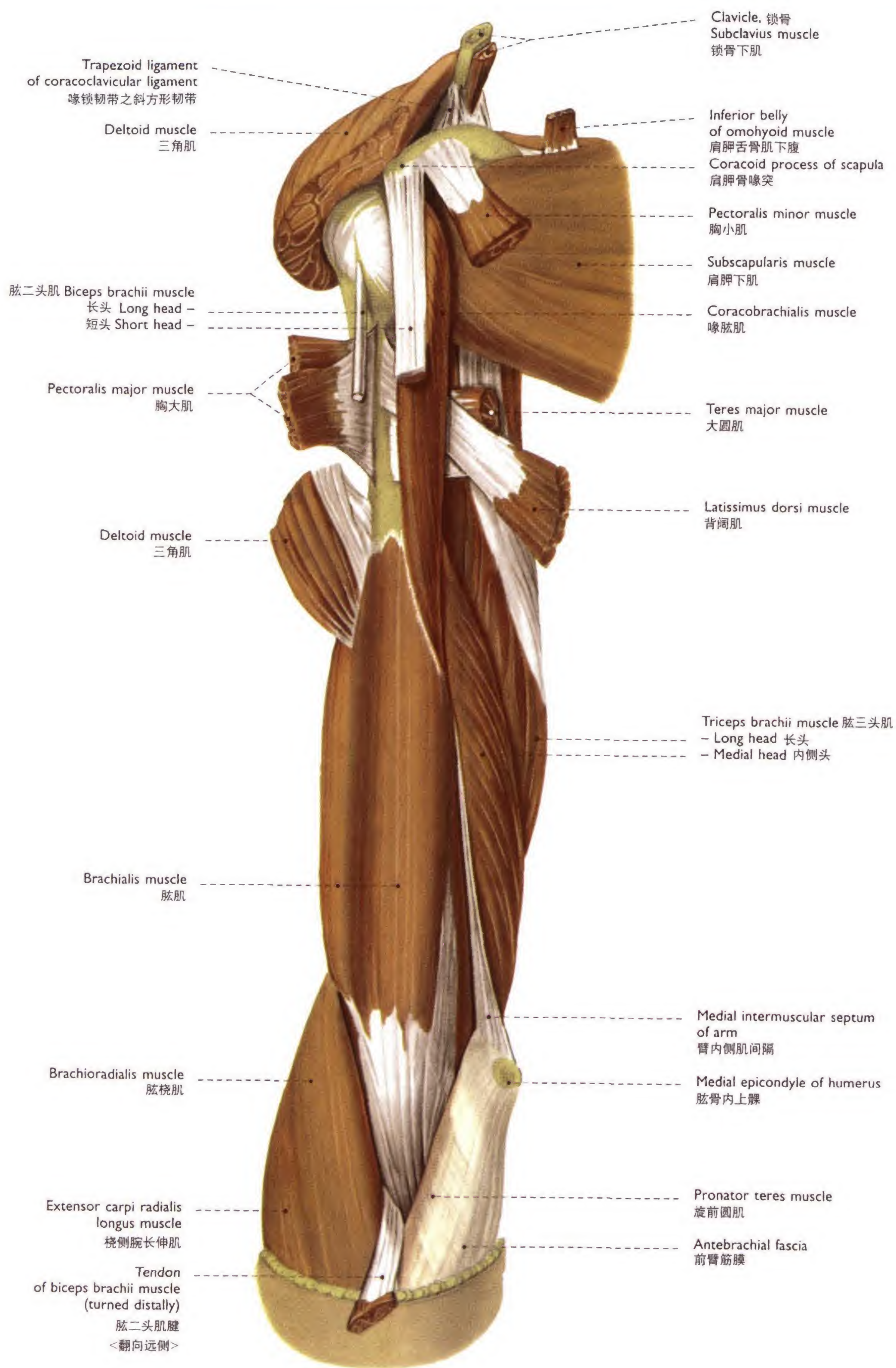
a Ventral aspect 前面观
b Dorsal aspect 后面观



106 Muscles of the right shoulder and the right arm (50%) 右肩和臂肌

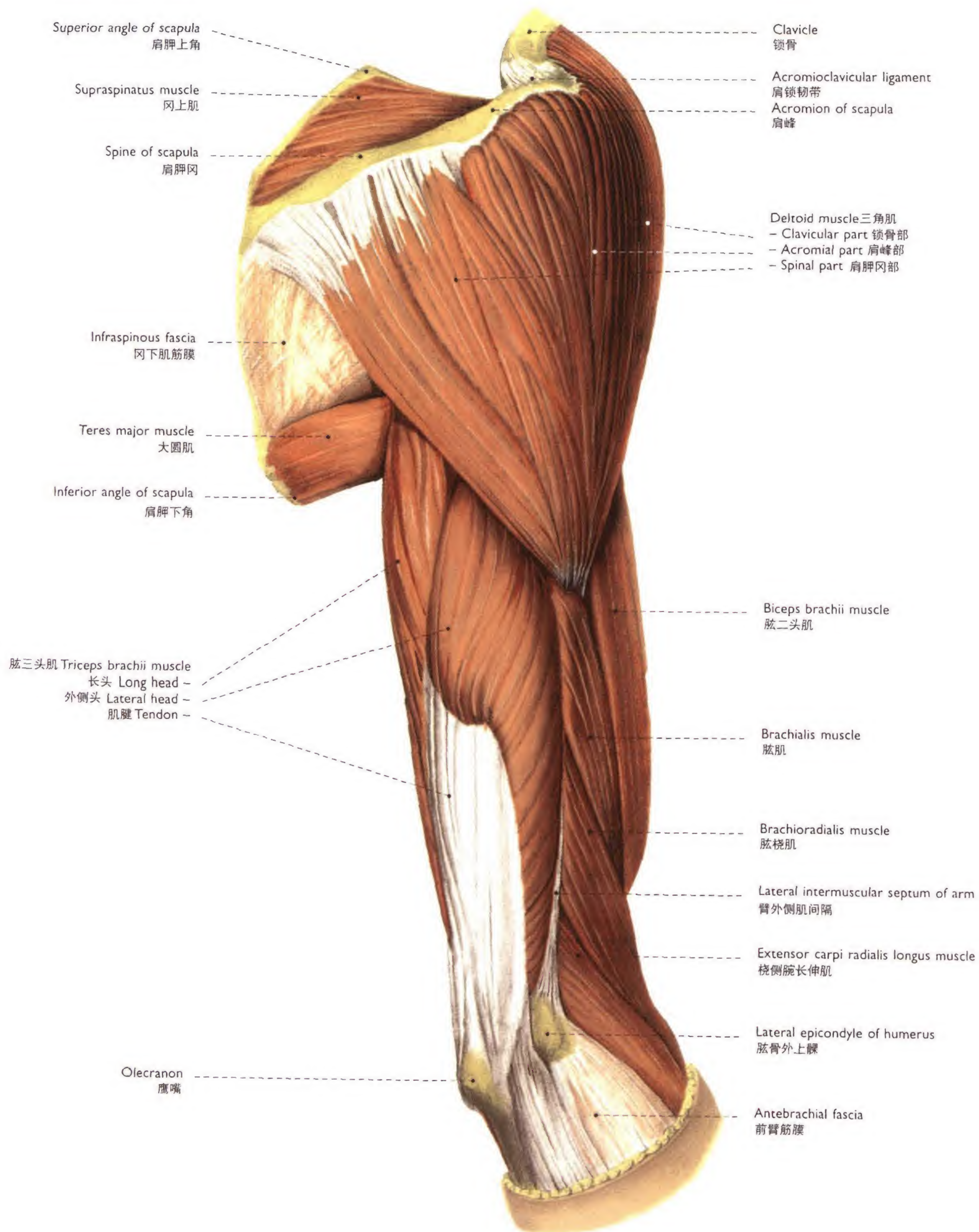
a Ventral aspect 前面观

b Coronal magnetic resonance image of the anterior region of elbow (MRI, T₁-weighted) 肘前区磁共振冠状位图像 (MRI, T₁加权)

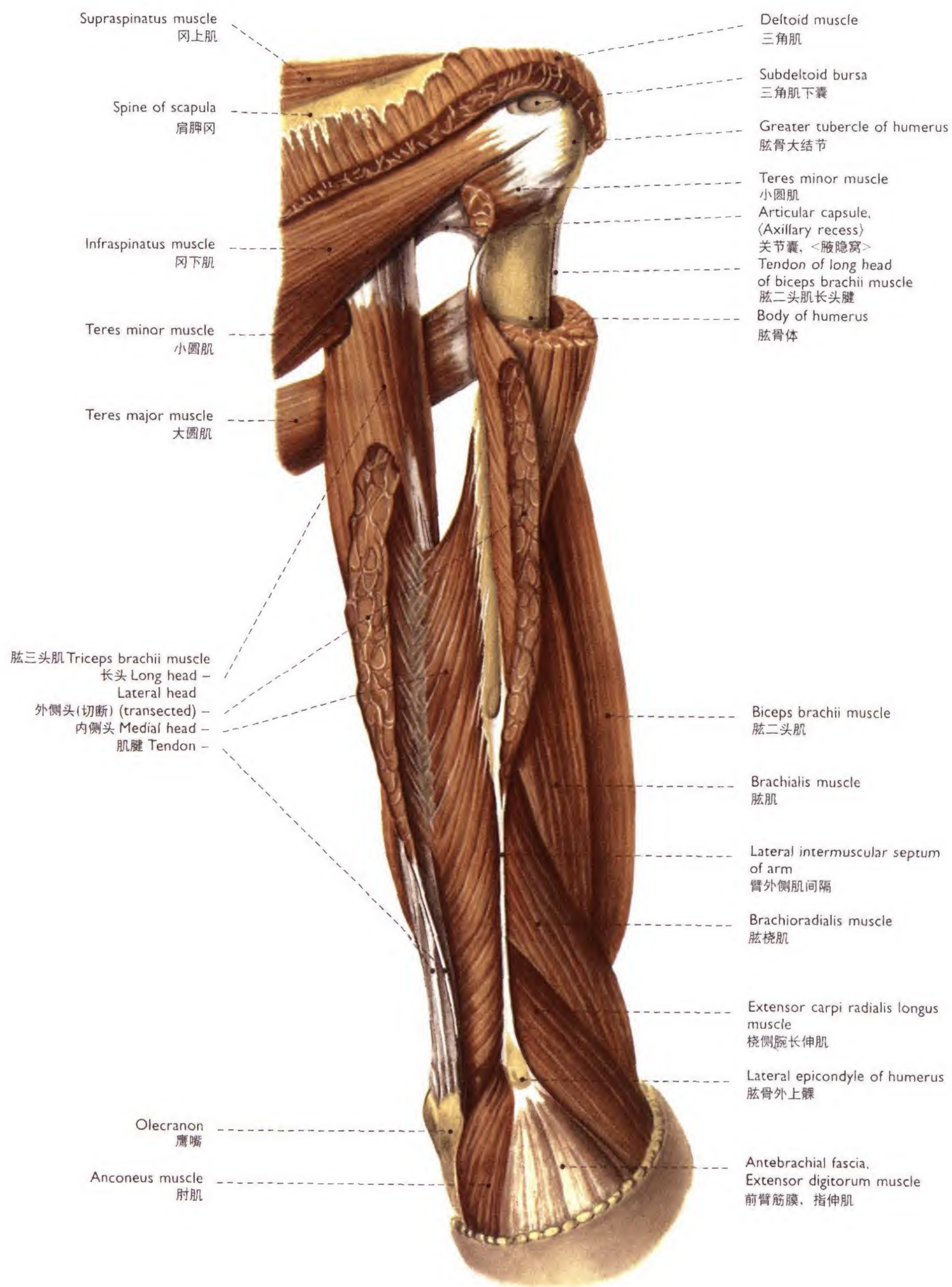


107 Muscles of the right shoulder and the right arm (50%) 右肩和臂肌

The deltoid muscle was partially removed. Ventral aspect 切除部分三角肌。前面观

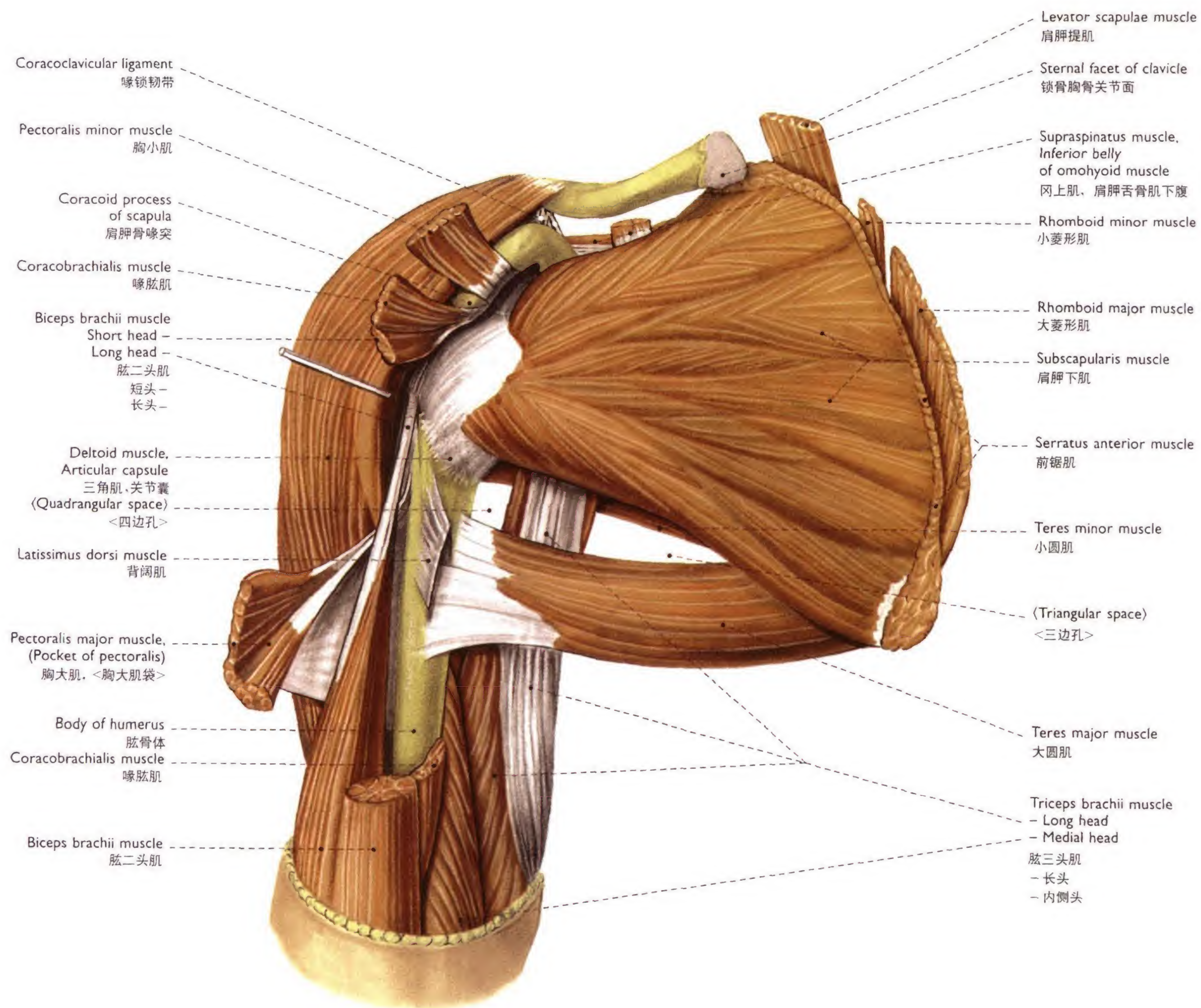


108 Muscles of the right shoulder
and the right arm (50%) 右肩和臂肌
Dorsolateral aspect 后外侧观

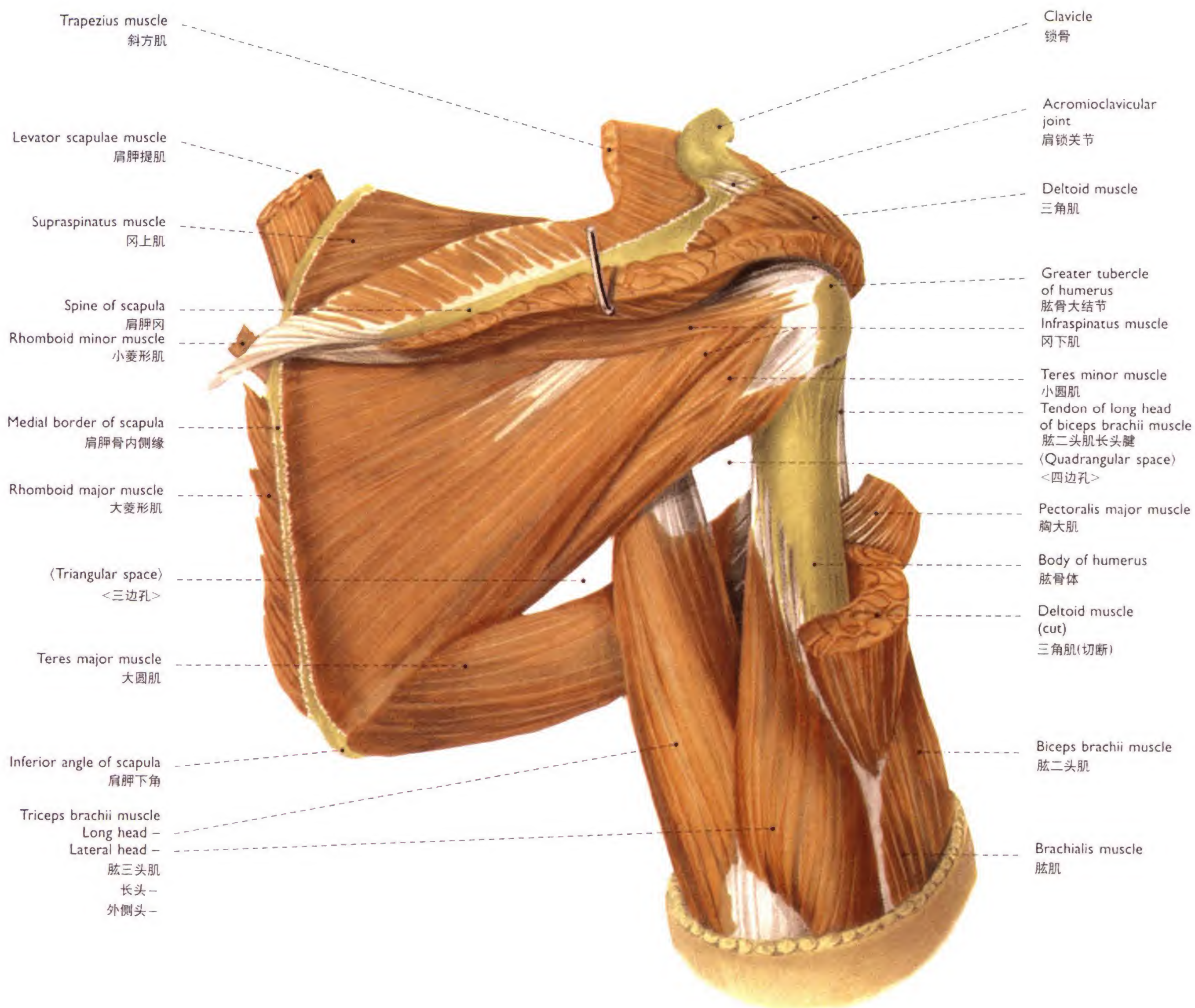


109 Muscles of the right shoulder and the right arm (50%) 右肩和臂肌

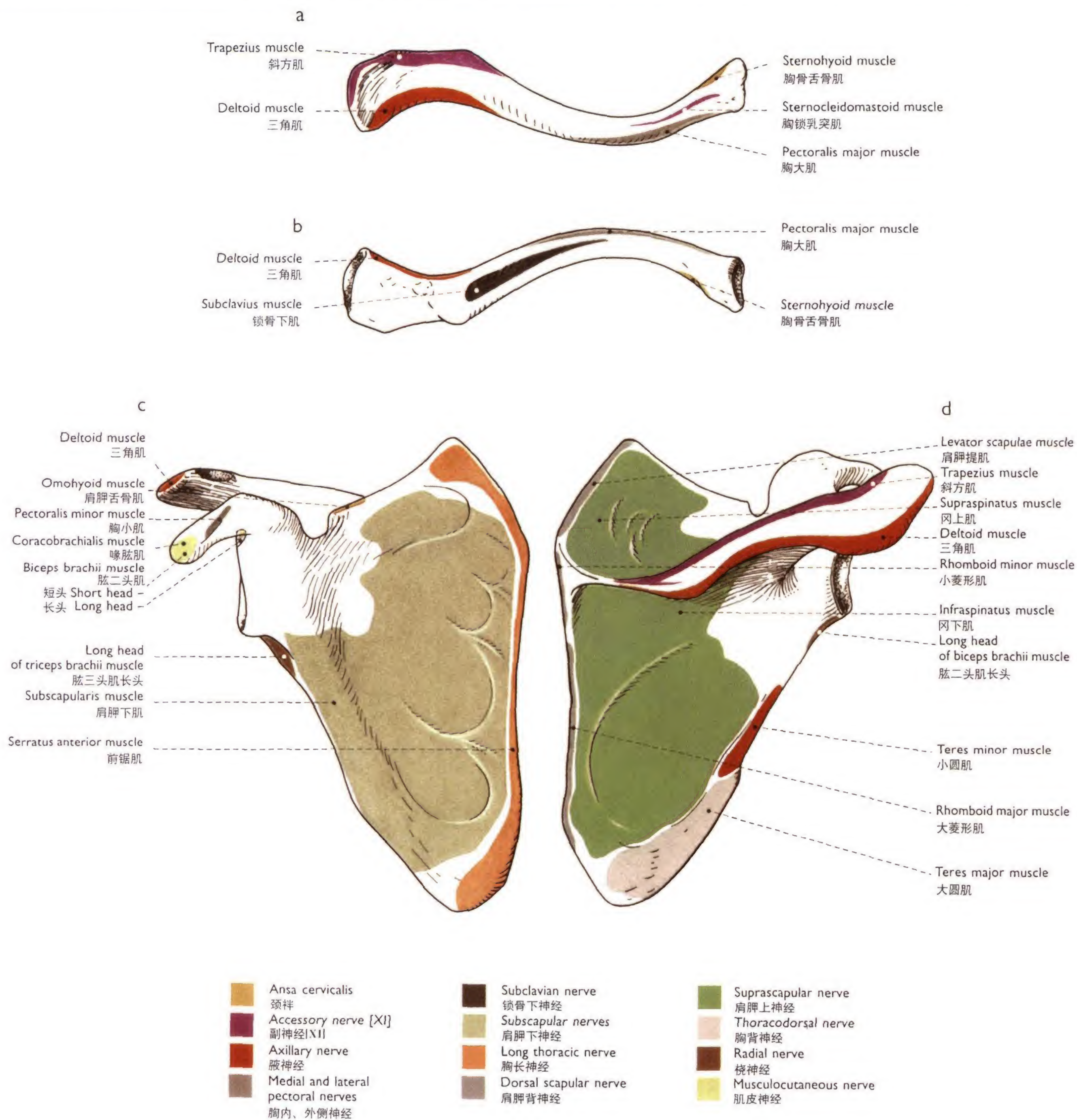
The deltoid muscle was partially removed.
Dorsolateral aspect 部分三角肌切除。后外侧面观



110 Muscles of the right shoulder
and the right arm (60%) 右肩和臂肌
Ventromedial aspect 前内侧面观



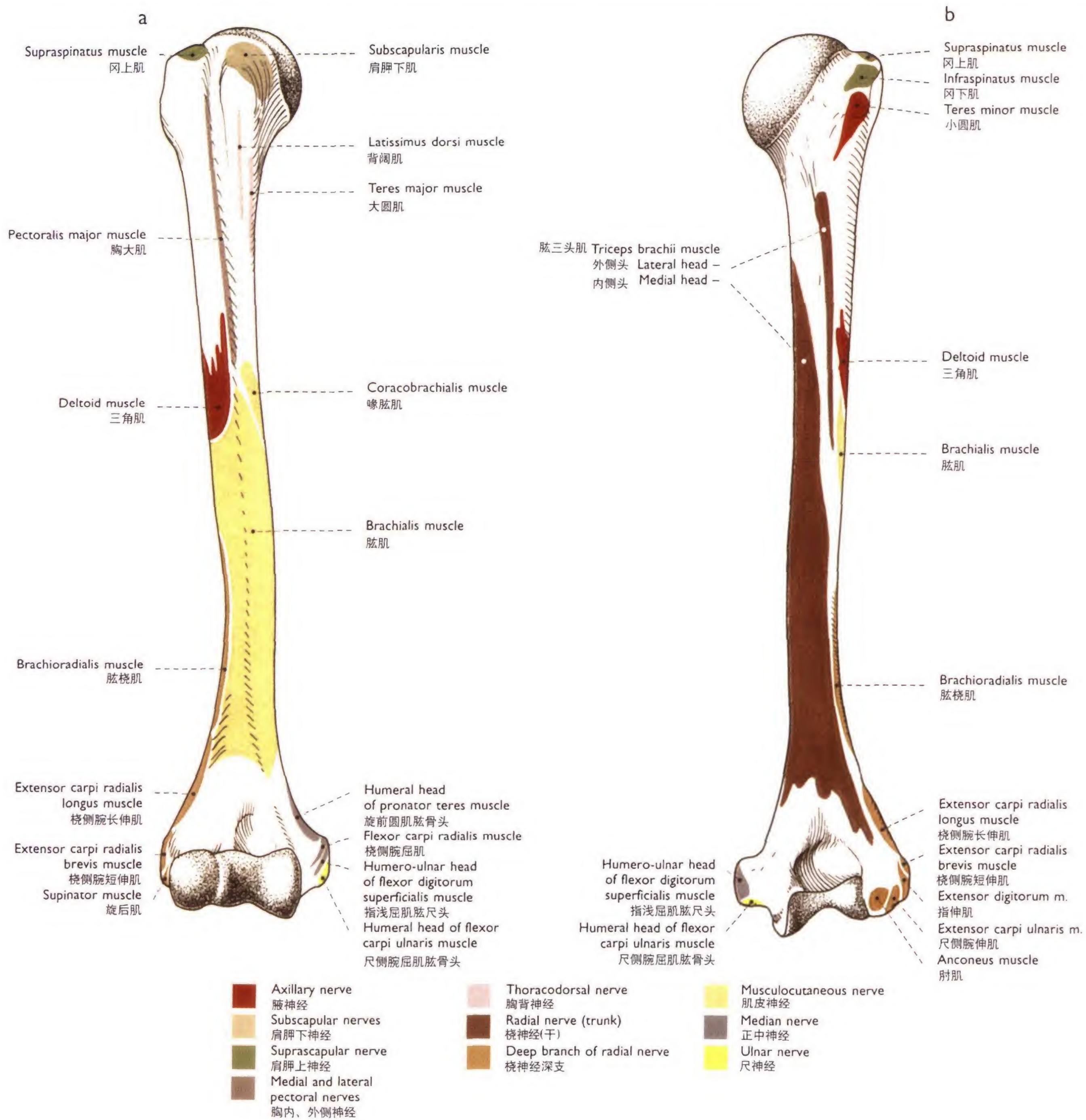
111 Muscles of the right shoulder and the right arm (60%) 右肩和臂肌
The deltoid muscle was partially removed.
Dorsal aspect 部分切除三角肌。后面观



112 Muscle attachments to the right pectoral girdle 右胸带骨肌附着部位

The colors indicate the innervation of the muscles attaching to the 彩色表示肌肉神经支配

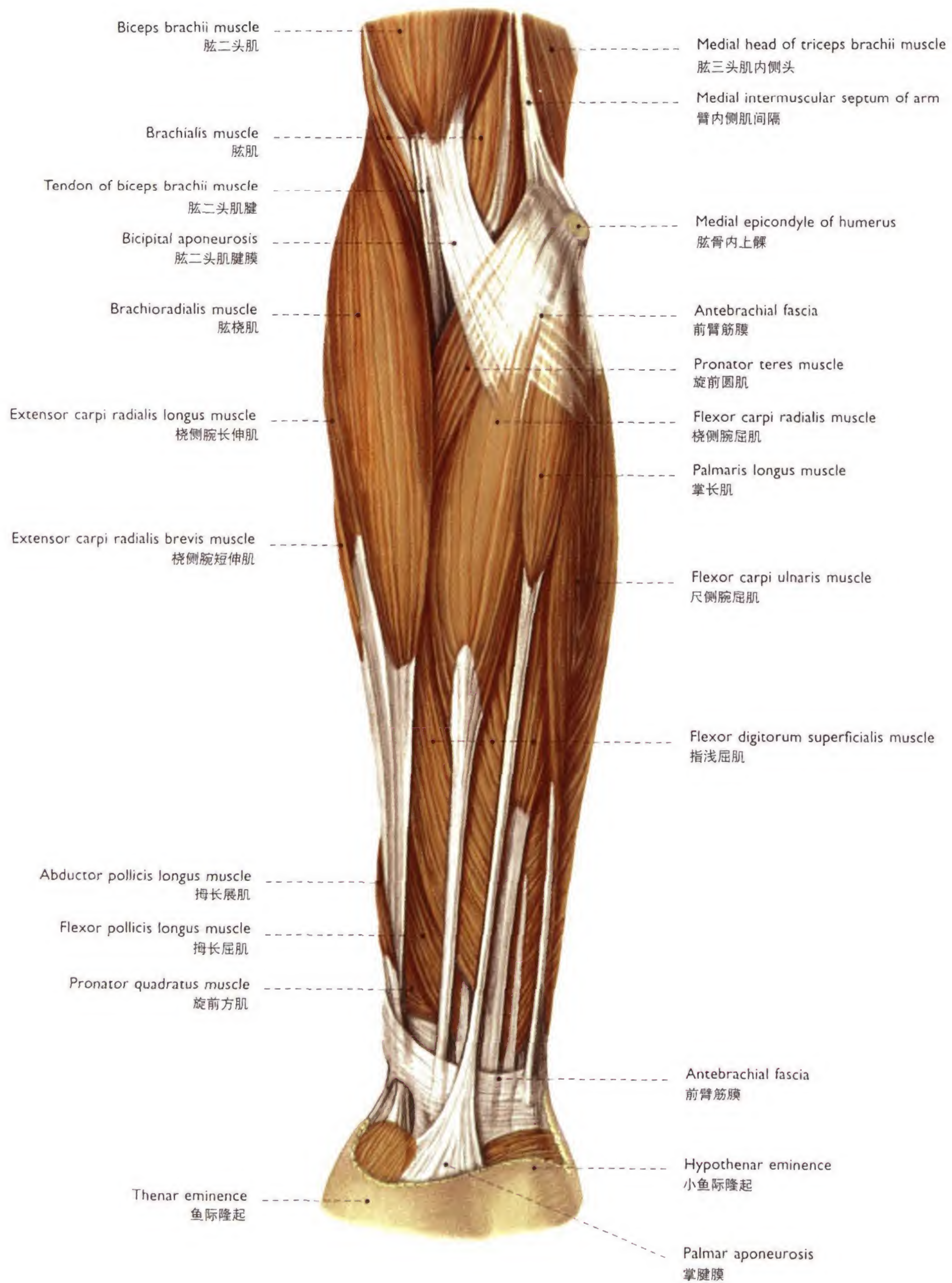
- a superior surface of the clavicle 锁骨上面
- b inferior surface of the clavicle 锁骨下面
- c costal surface of the scapula 肩胛骨肋面
- d posterior surface of the scapula 肩胛骨后面



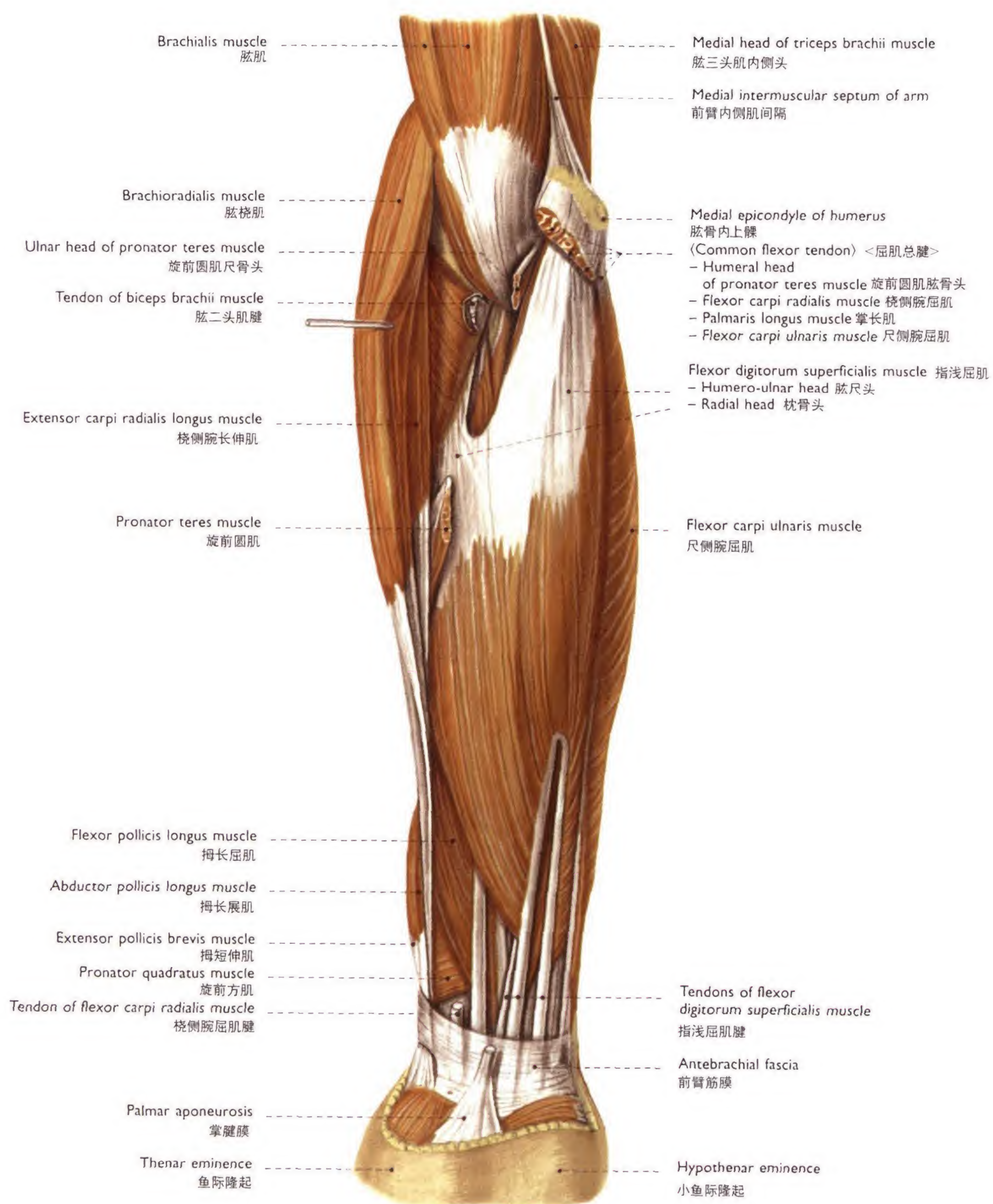
113 Muscle attachments to the right humerus 右肱骨肌肉附着部位

The colors indicate the innervation of the muscles
attaching to the 彩色表示肌肉神经支配

a ventral surface 前面
b dorsal surface. 后面

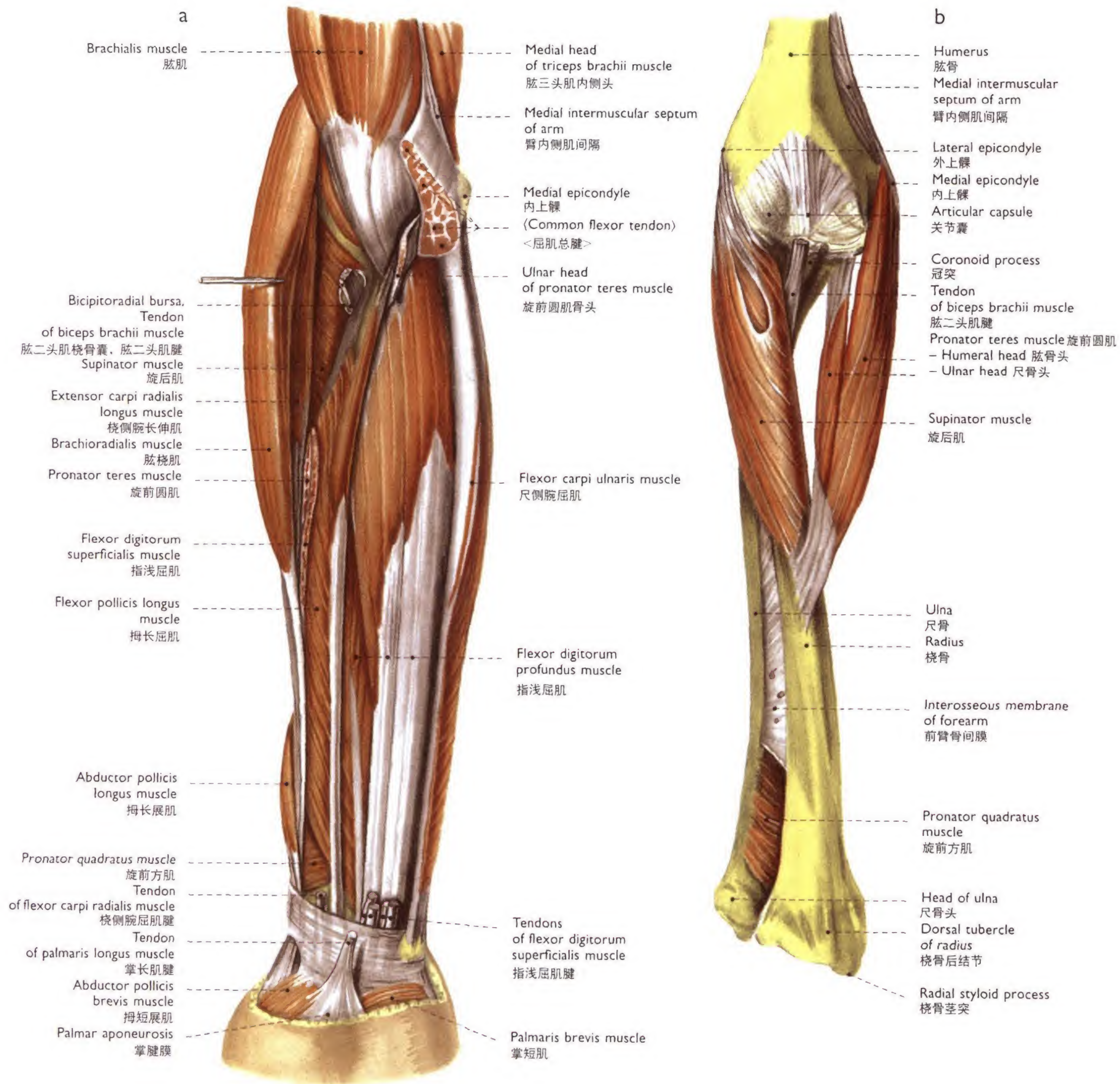


114 Muscles of the right forearm (50%) 右前臂肌
Superficial layer, ventral aspect 浅层, 前面观



115 Muscles of the right forearm (50%) 右前臂肌

Superficial layer. Some superficial forearm flexors were removed.
Ventral aspect 浅层, 部分前臂浅层屈肌被切除。前面观

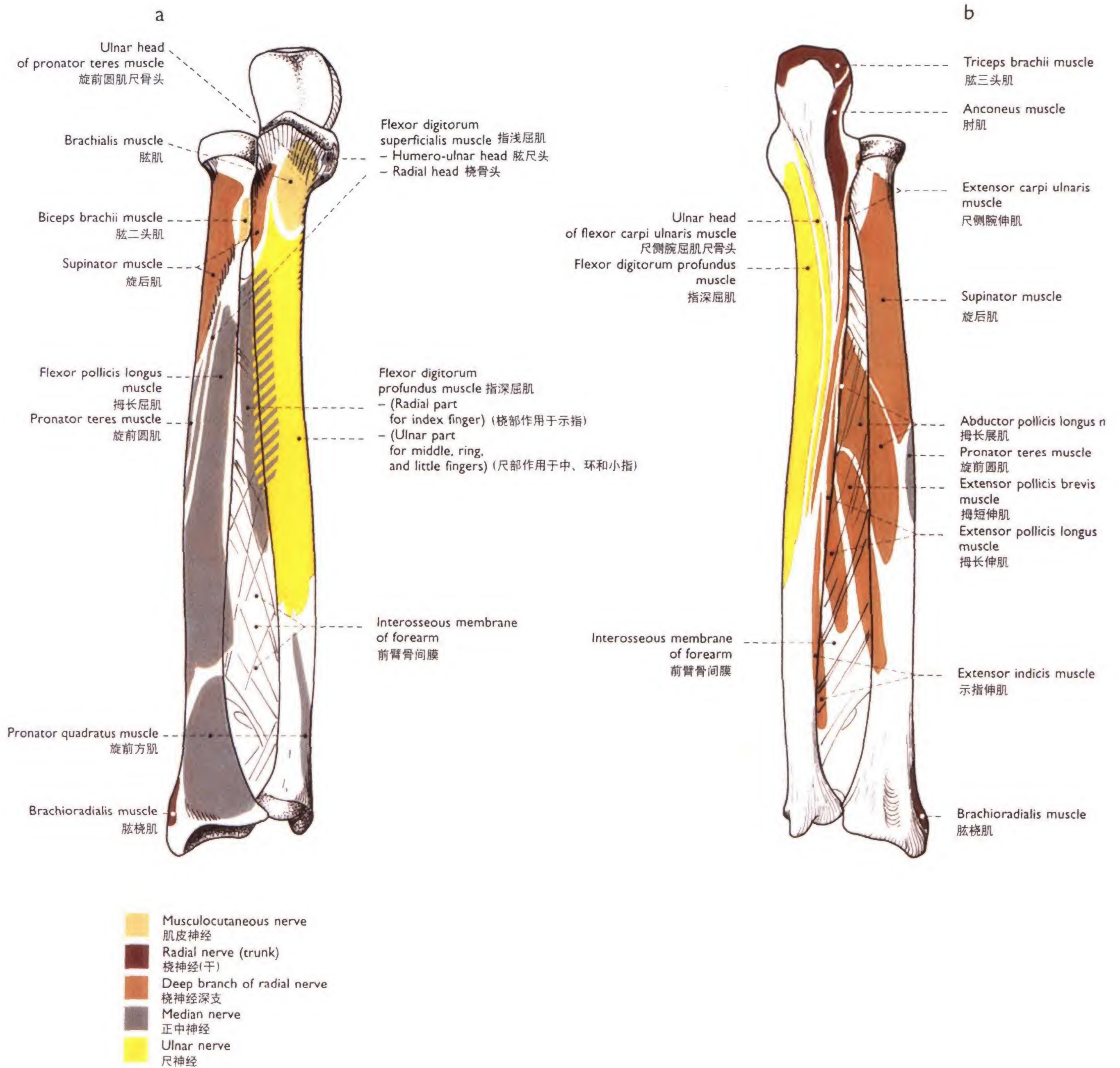


116 Muscles of the right forearm (50%) 右前臂肌

Ventral aspect 前面观

a Deep layer 深层

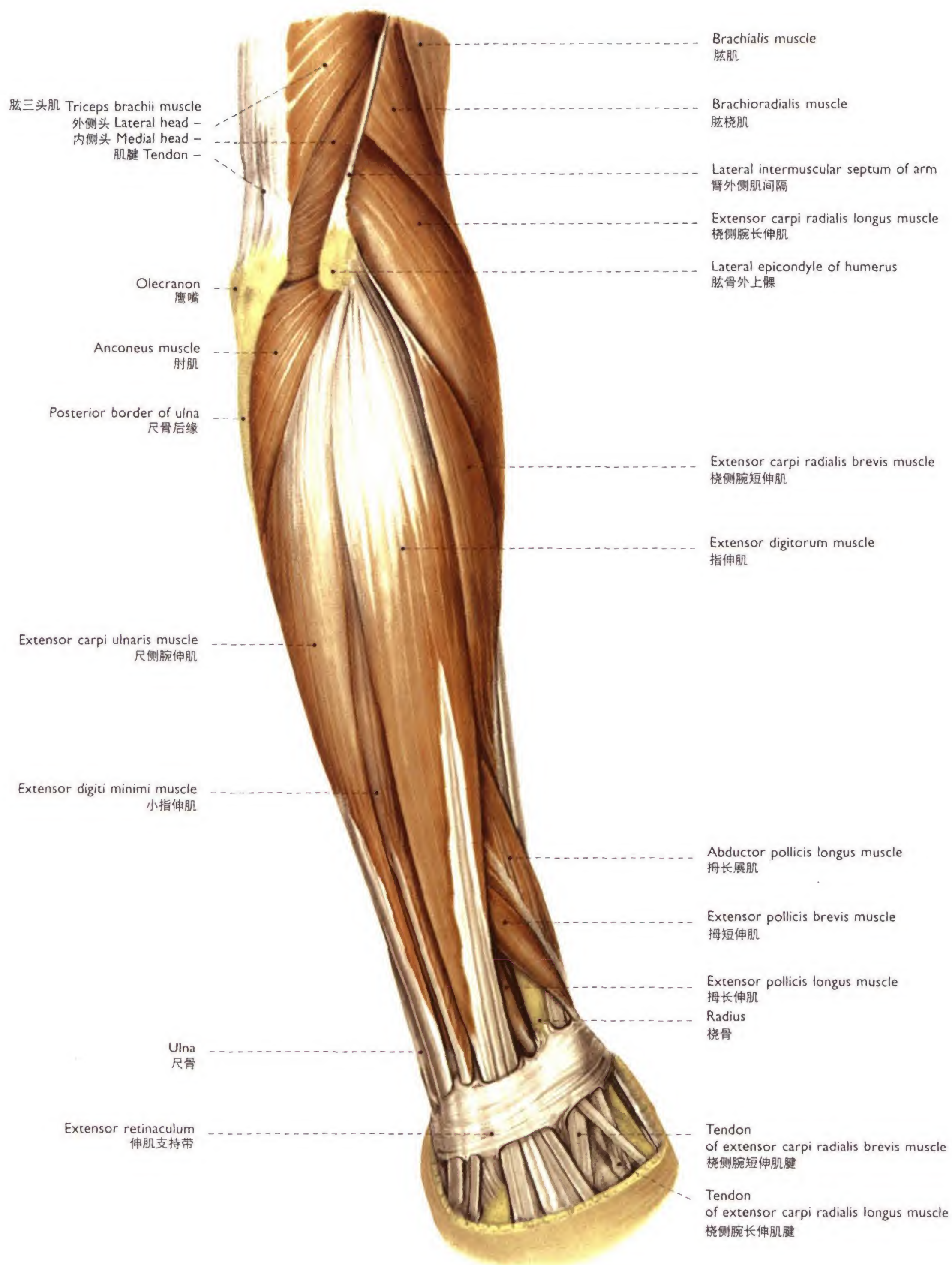
b Supinator and pronator muscles in pronated position of the forearm 前臂旋前位时旋后肌和旋前肌



117 Muscle attachments to the radius, ulna, and interosseous membrane of the right forearm 右桡骨、尺骨和骨间膜的肌肉附着

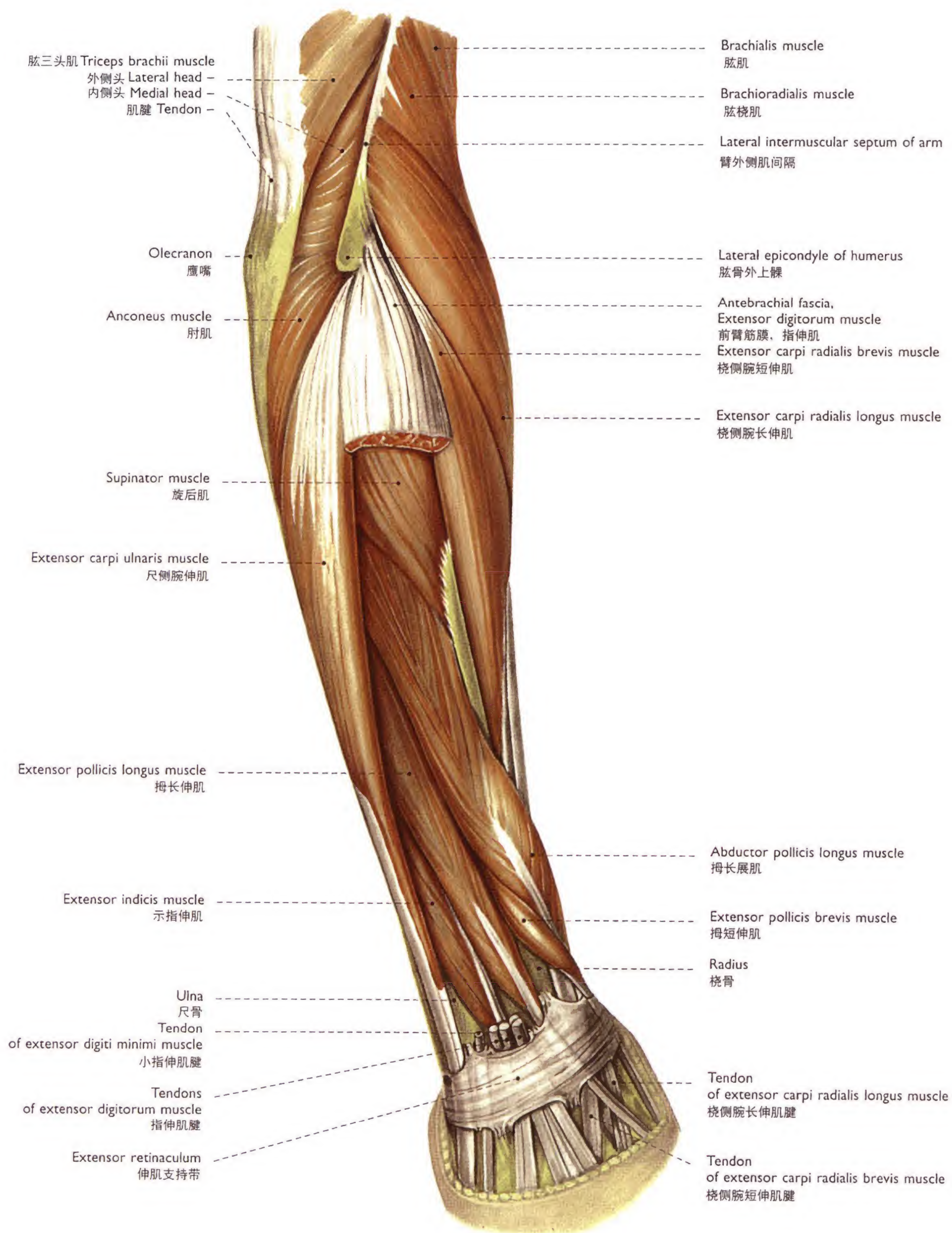
The colors indicate the innervation of the muscles attaching to the 彩色表示肌肉神经支配

- a ventral surface 前臂前面
b dorsal surface 前臂后面



118 Muscles of the right forearm (50%) 右前臂肌

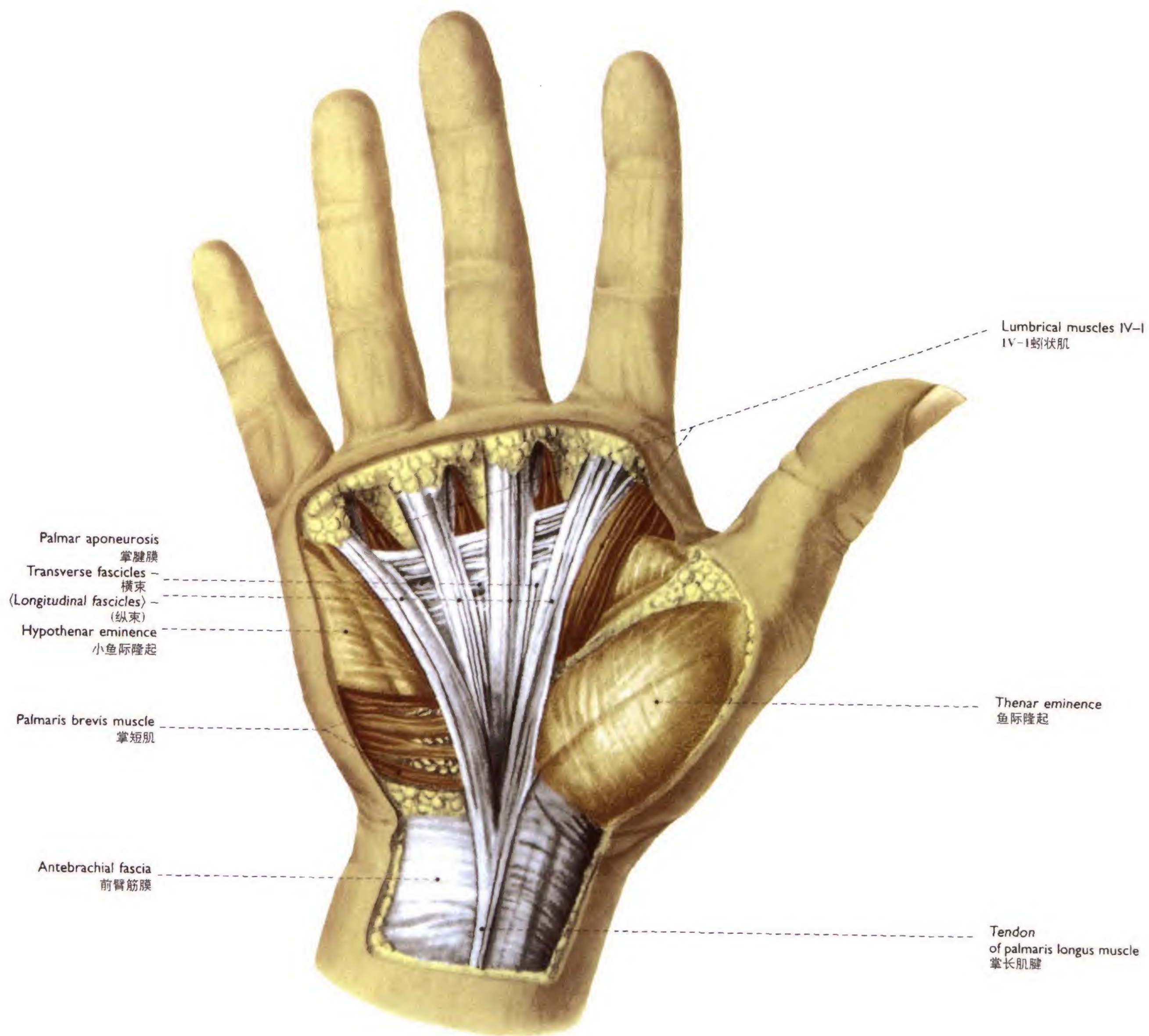
Superficial layer. The forearm is slightly pronated.
Dorsolateral aspect 浅层，前臂略旋前。后外侧观



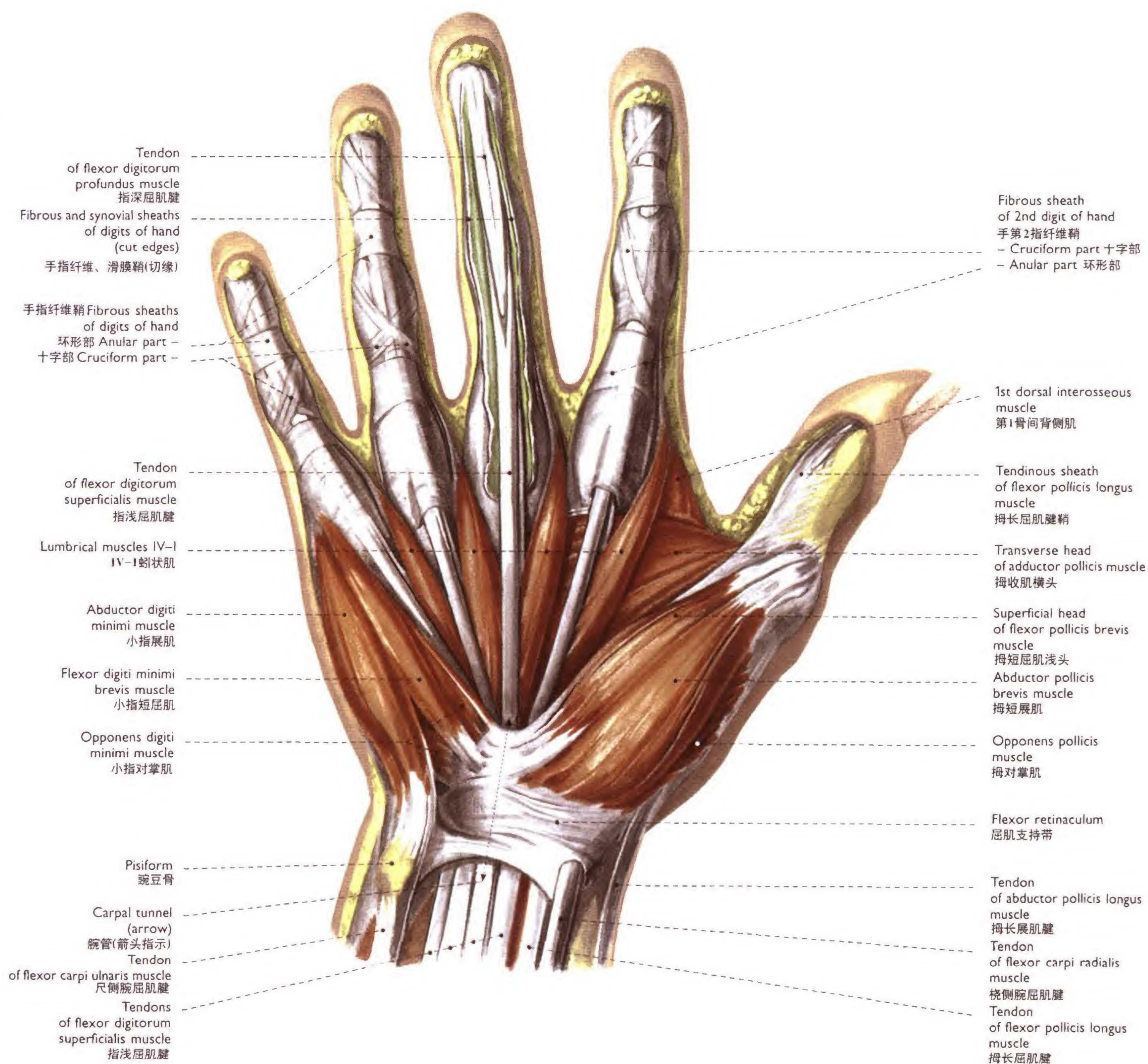
119 Muscles of the right forearm (50%) 右前臂肌

Deep layer. The forearm is slightly pronated.

Dorsolateral aspect 深层, 前臂略旋前。后外侧观

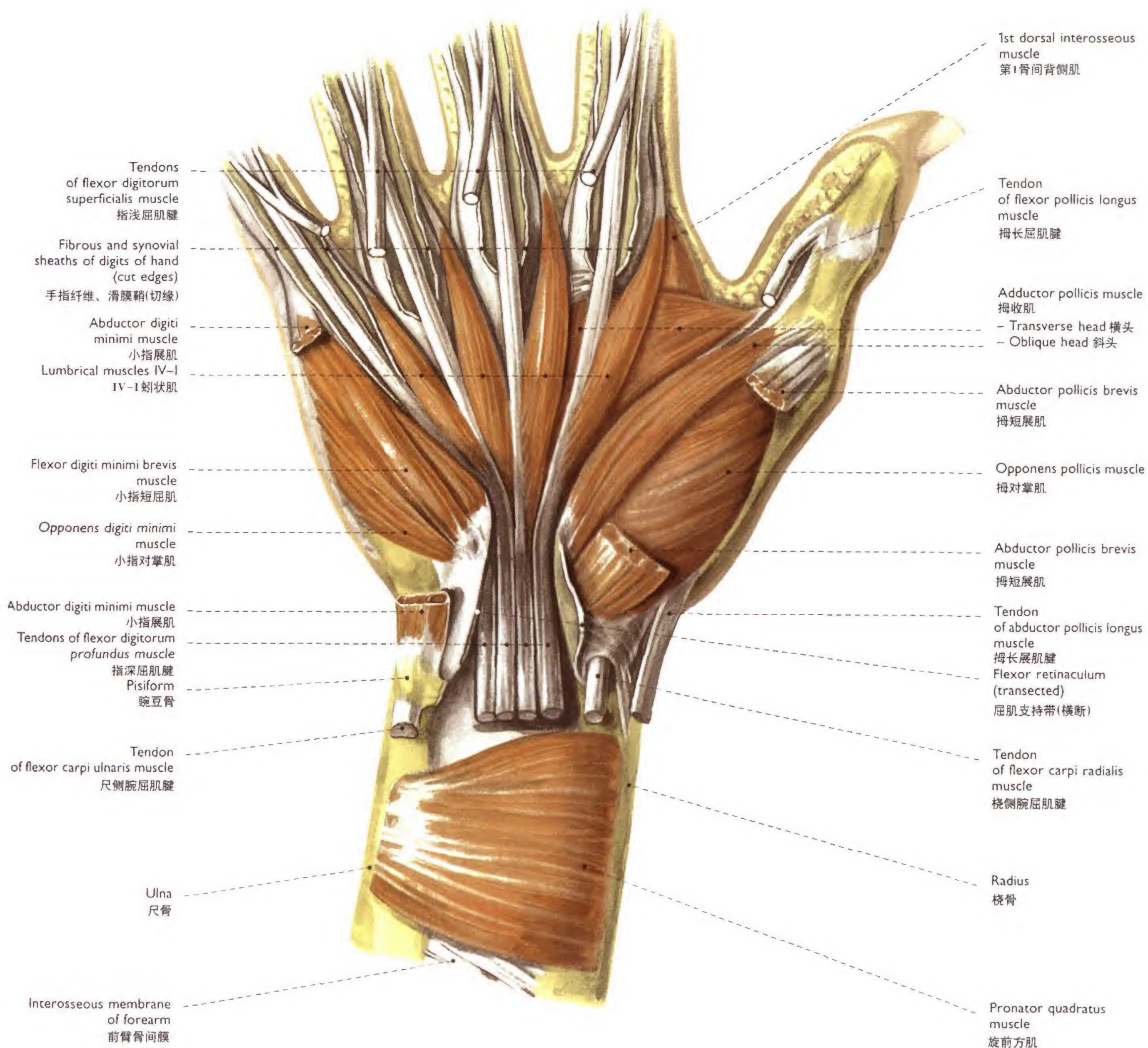


120 Palmar aponeurosis of the right hand (75%) 右手掌腱膜
Palmar aspect 前面观



121 Muscles of the right hand (75%) 右手肌

Superficial layer. The palmar aponeurosis was removed.
Palmar aspect 浅层, 掌腱膜切除, 前面观



122 Muscles of the right hand (75%) 右手肌

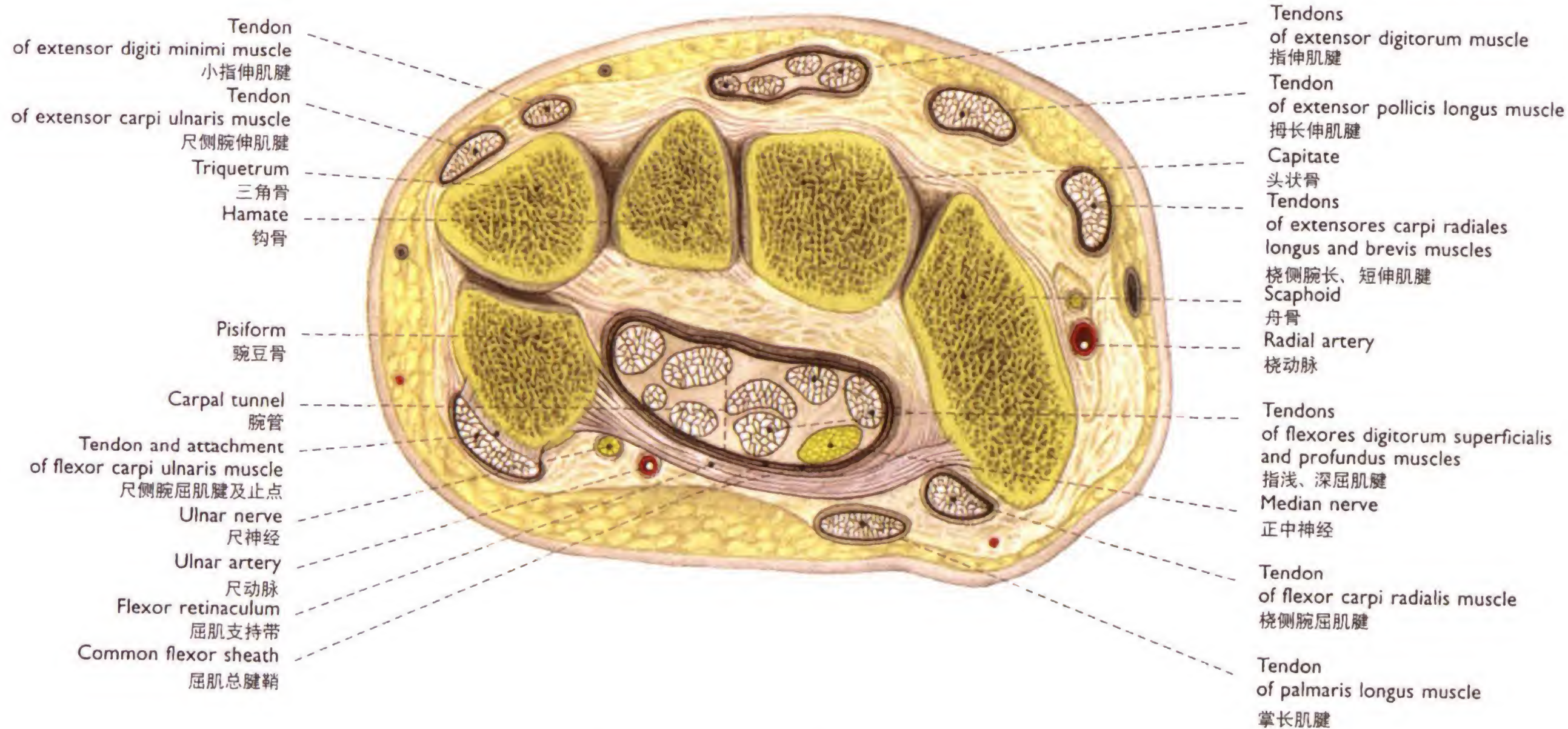
Superficial layer. The flexor superficialis muscle was removed and the carpal tunnel opened.

Palmar aspect 浅层、指浅屈肌被切除、腕管被切开。前面观

a

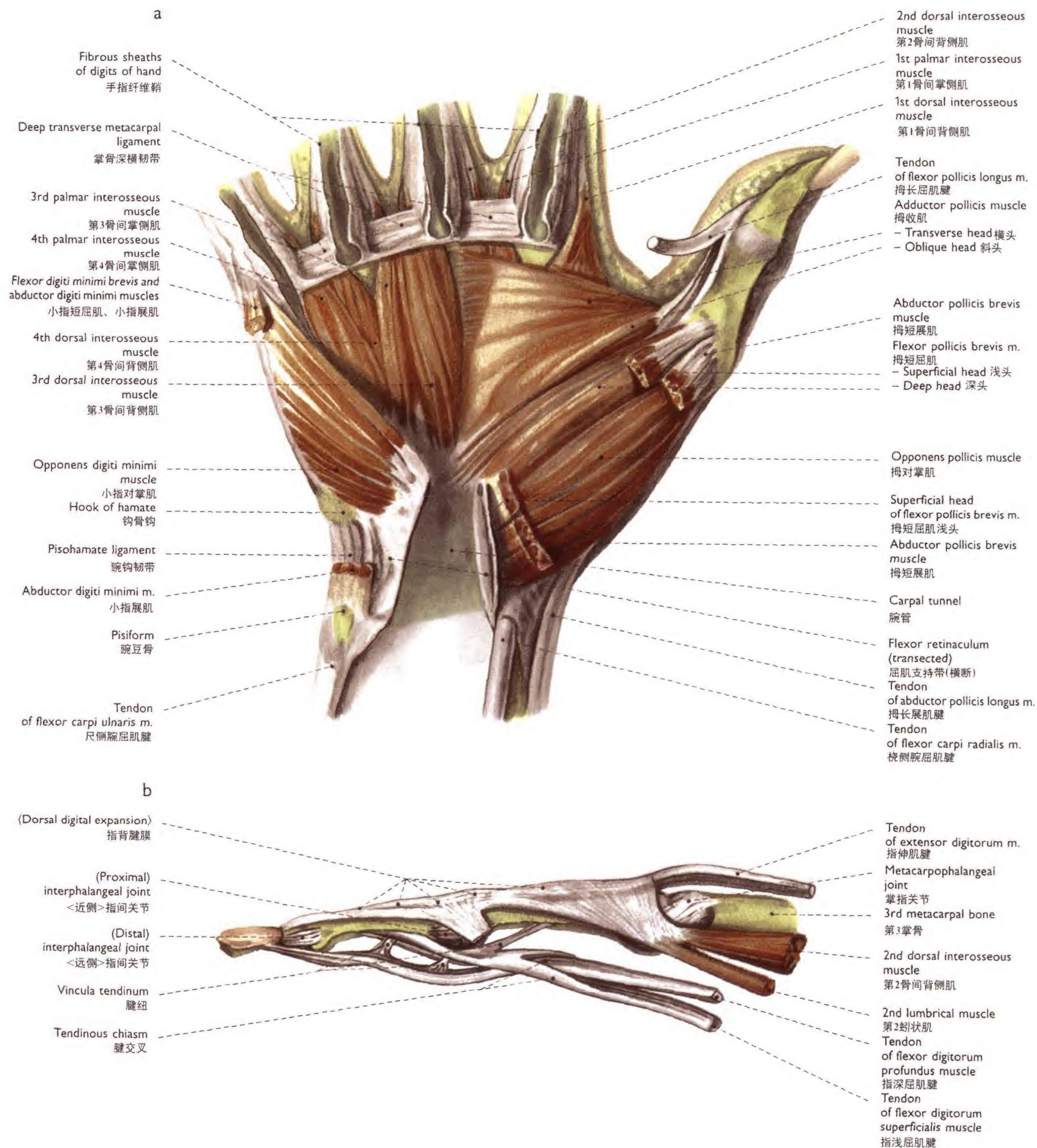


b



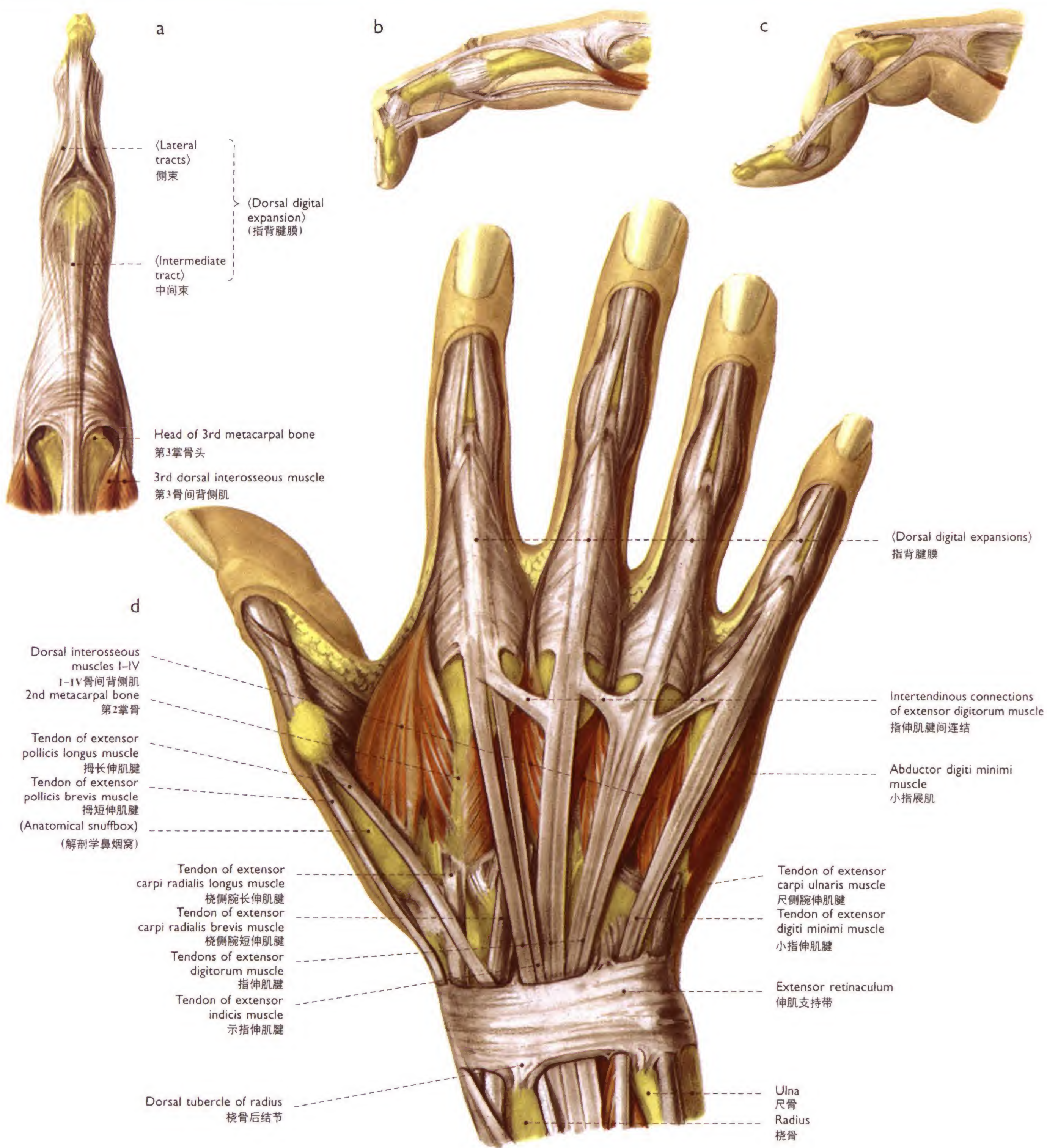
123 Muscles of the right hand 右手肌

- a Radio-ulnar (coronal) magnetic resonance image (MRI, T₂-weighted) (100%) 桡尺(冠状)位, 磁共振图像(MRI, T₂加权)
 b Transverse section through the wrist and the carpal tunnel (140%), hand in pronated position, distal aspect 手旋前位, 经腕和腕管横断面, 下面观



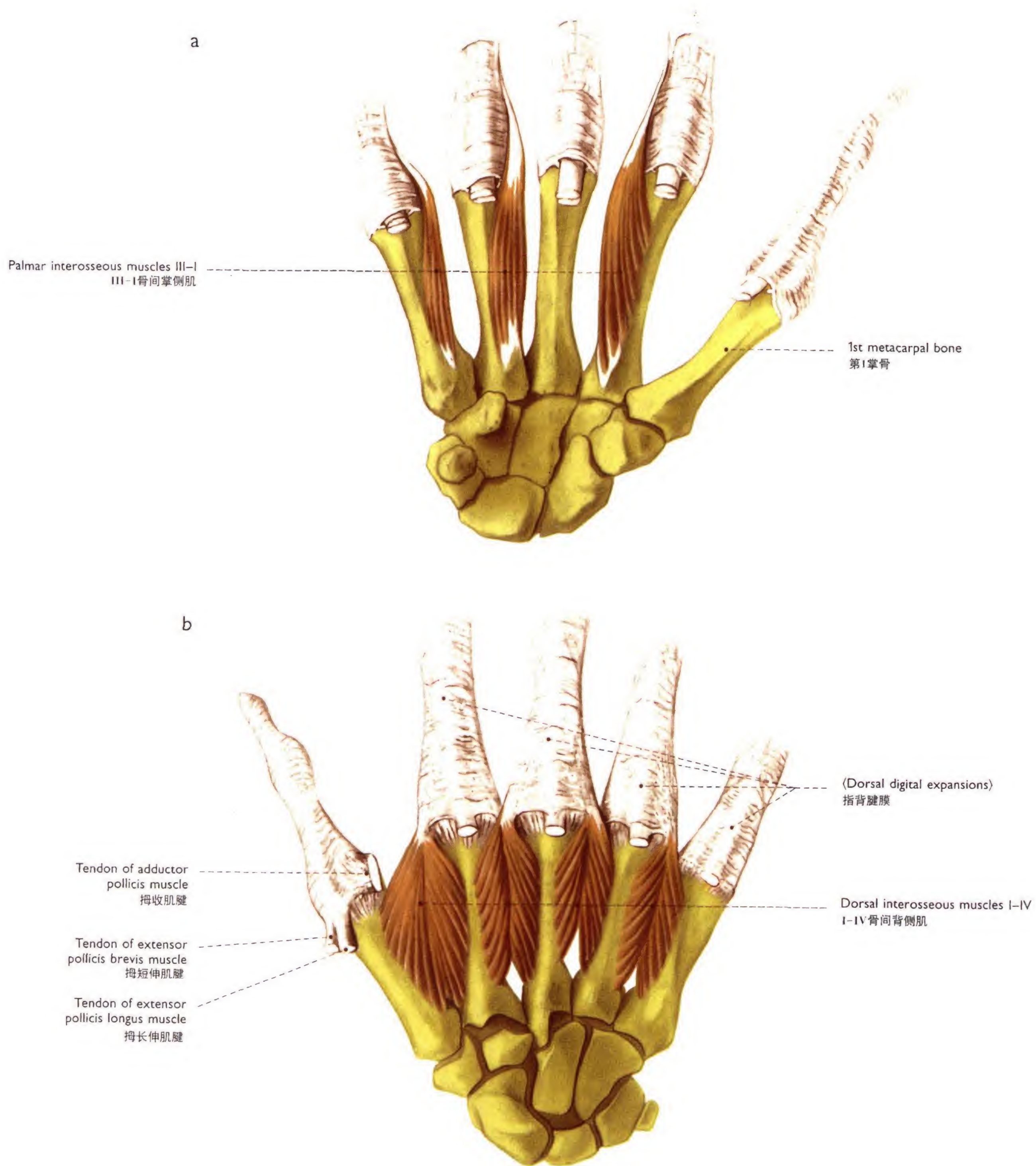
124 Muscles of the right hand (75%) 右手肌

- a Deep layer, palmar aspect 深层、前面观
- b Middle finger with the dorsal digital expansion, radial aspect 中指指背腱膜、桡侧面观



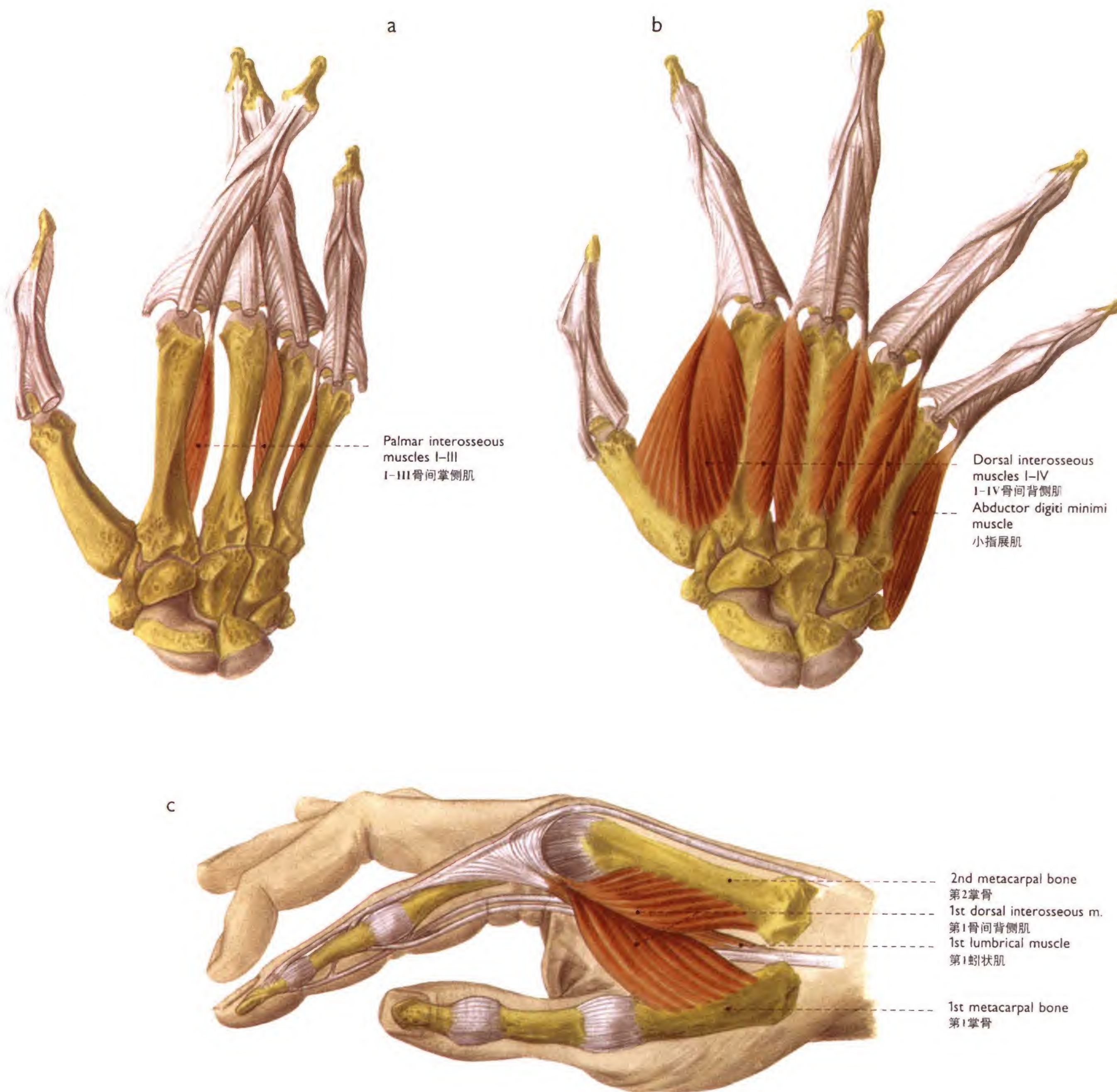
125 Muscles of the right hand 右手肌

- a Muscles of the dorsum and dorsal digital expansion of the middle finger (75%), dorsal aspect 背侧肌和中指指背腱膜, 后面观
- b, c Ruptures of the dorsal digital expansion above the proximal (b) and distal (c) interphalangeal joints (50%) 近侧和远侧指间关节处指背腱膜破裂
- d Muscles of the dorsum of hand (75%), dorsal aspect 手背肌, 后面观



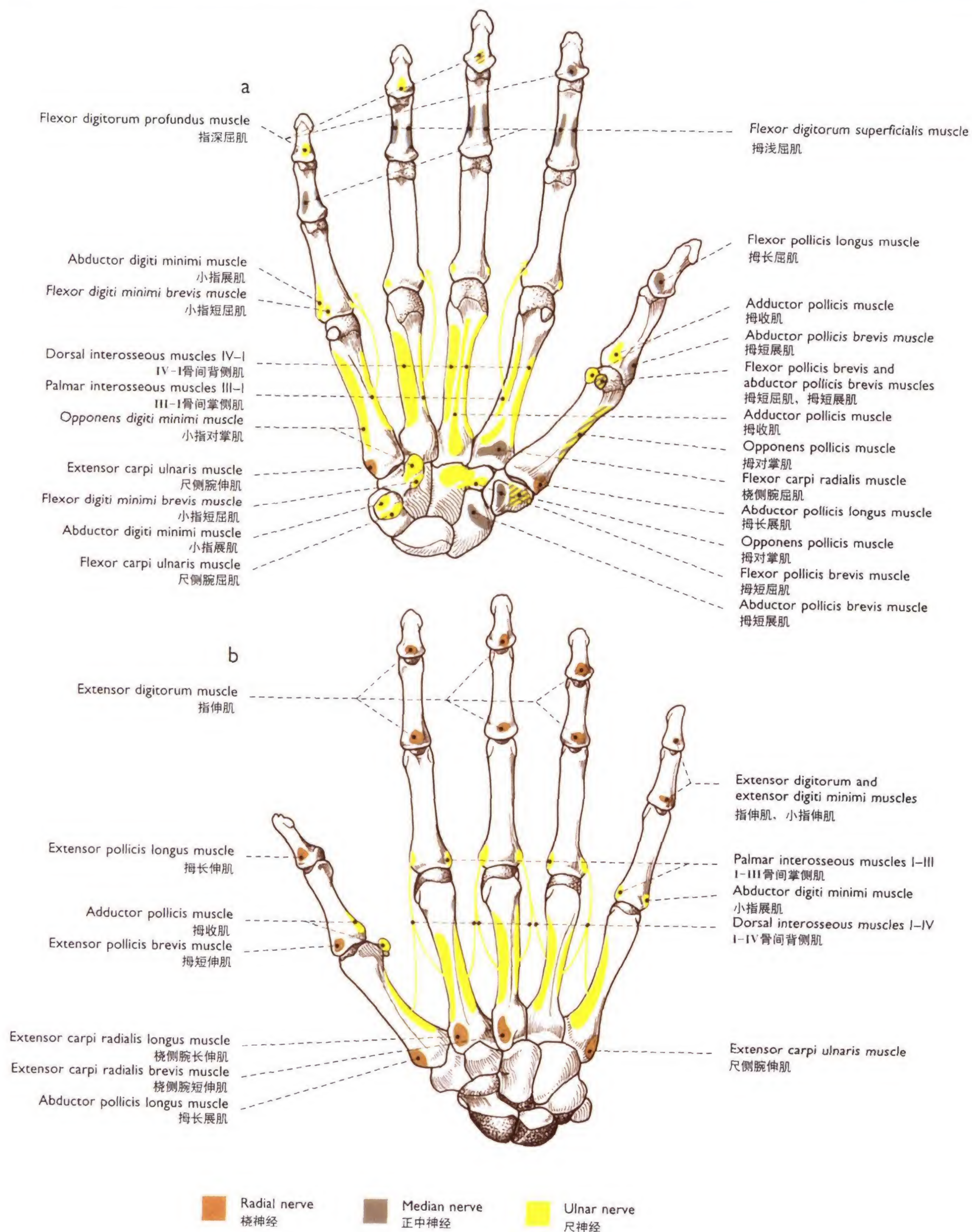
126 Interosseous muscles of the right hand (75%) 右手骨间肌

- a Palmar interosseous muscles, palmar aspect 骨间掌侧肌, 前面观
b Dorsal interosseous muscles, dorsal aspect 骨间背侧肌, 后面观



127 Interosseous and lumbrical muscles of the right hand (60%) 右手骨间肌和蚓状肌

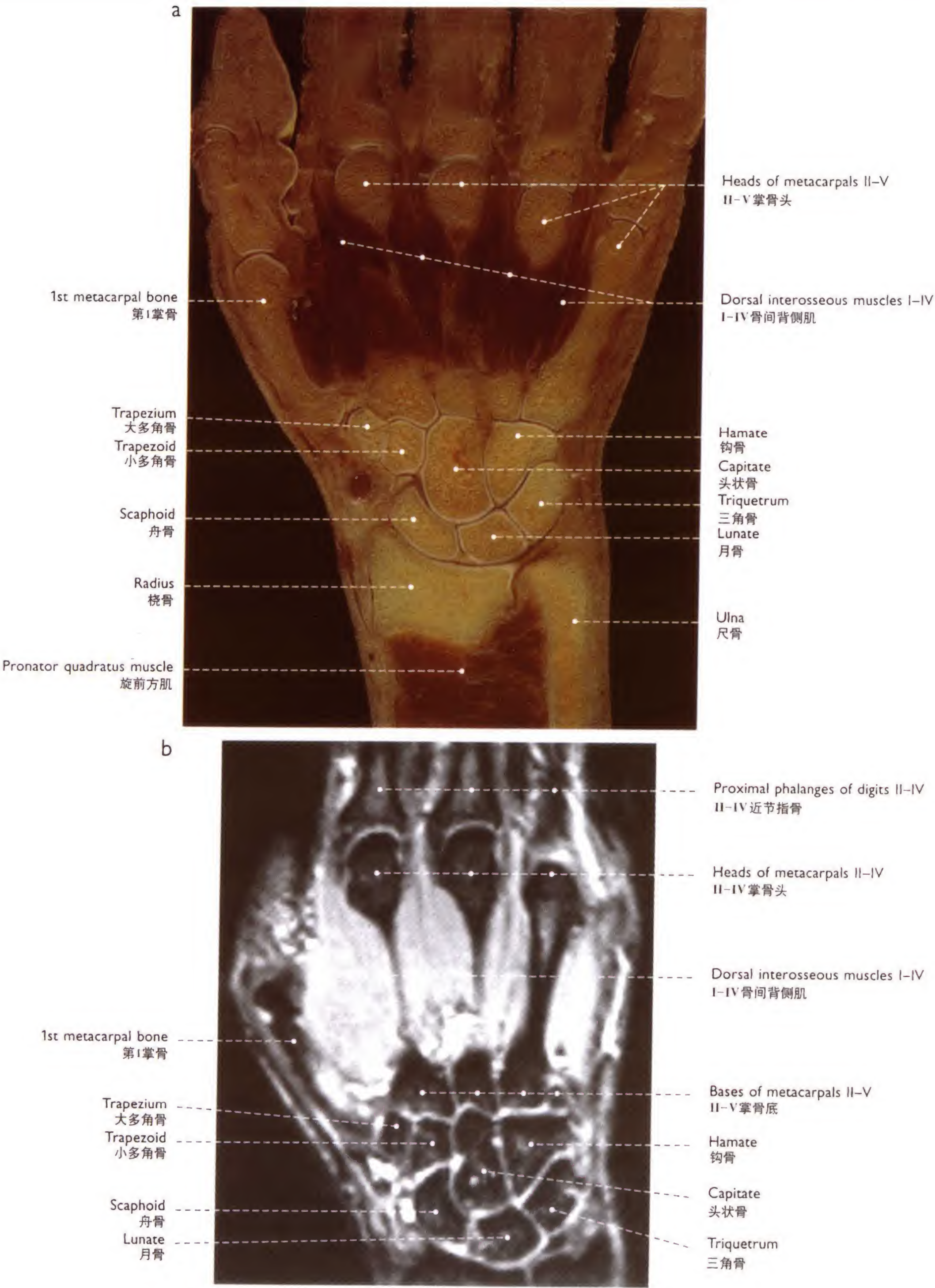
- a Function of the palmar interosseous muscles, dorsal aspect 骨间掌侧肌的功能, 后面观
b Function of the dorsal interosseous muscles, dorsal aspect 骨间背侧肌的功能, 后面观
c Function of the first lumbrical and first dorsal interosseous muscles, radial aspect 第1蚓状肌和第1骨间背侧肌的功能, 外侧面观



128 Muscle attachments to the bones of the right hand 右手骨肌肉附着点

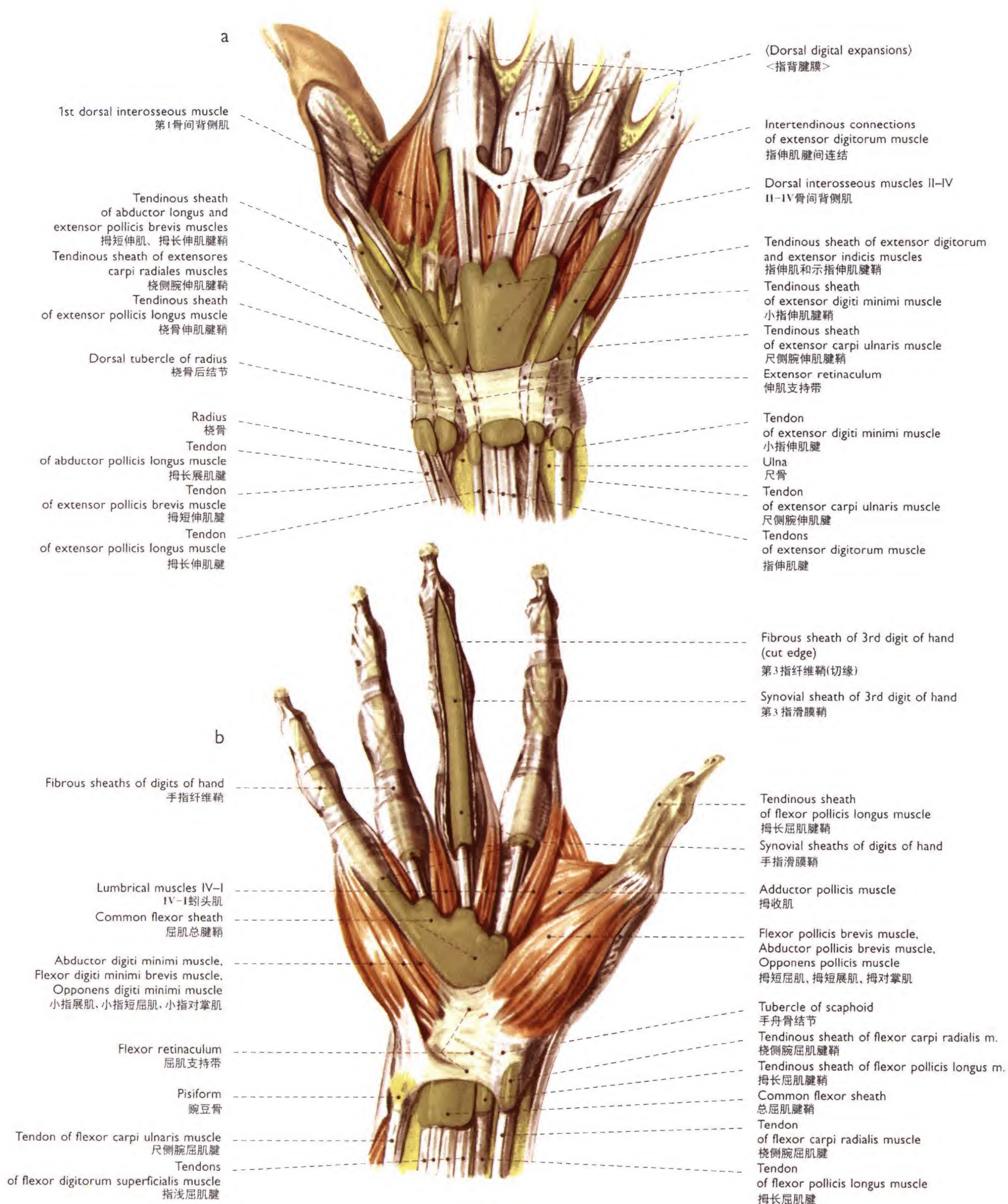
The colors indicate the innervation of the muscles attaching to the 彩色表示肌肉神经支配

- a palmar surface 前面
b dorsal surface. 后面



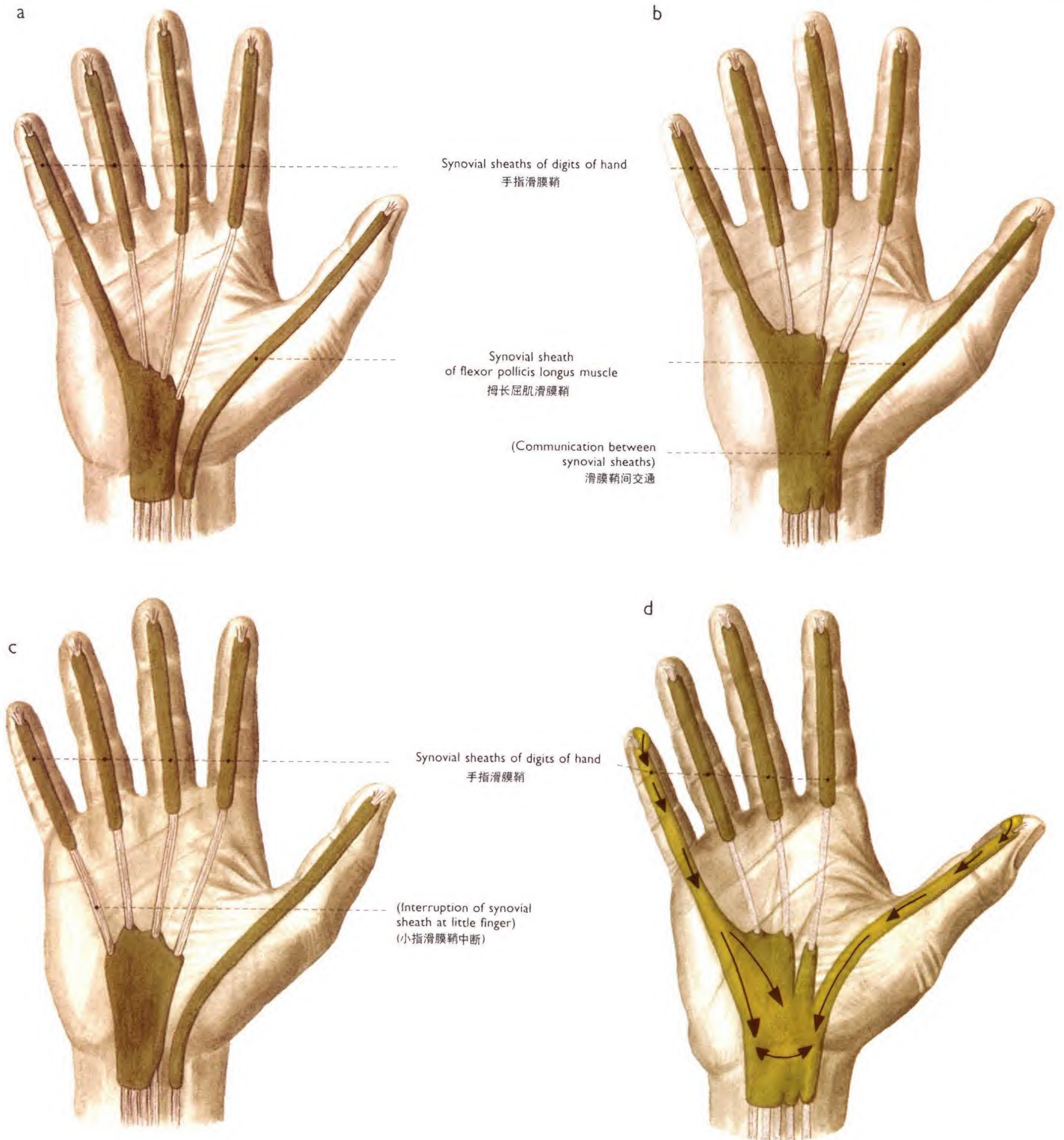
129 Dorsal interosseous muscles
of the right hand (75%) 右手骨间背侧肌

- a Anatomical radio-ulnar section, dorsal aspect 桡尺位解剖断面, 后面观
b Radio-ulnar (coronal) magnetic resonance image
(MRI, T₂-weighted) of the wrist and the metacarpus 腕和掌磁共振桡尺(冠状)位图像(MRI, T₂加权)



130 Tendinous sheaths on the wrist and the fingers of the right hand (50%) 右手指和腕的腱鞘

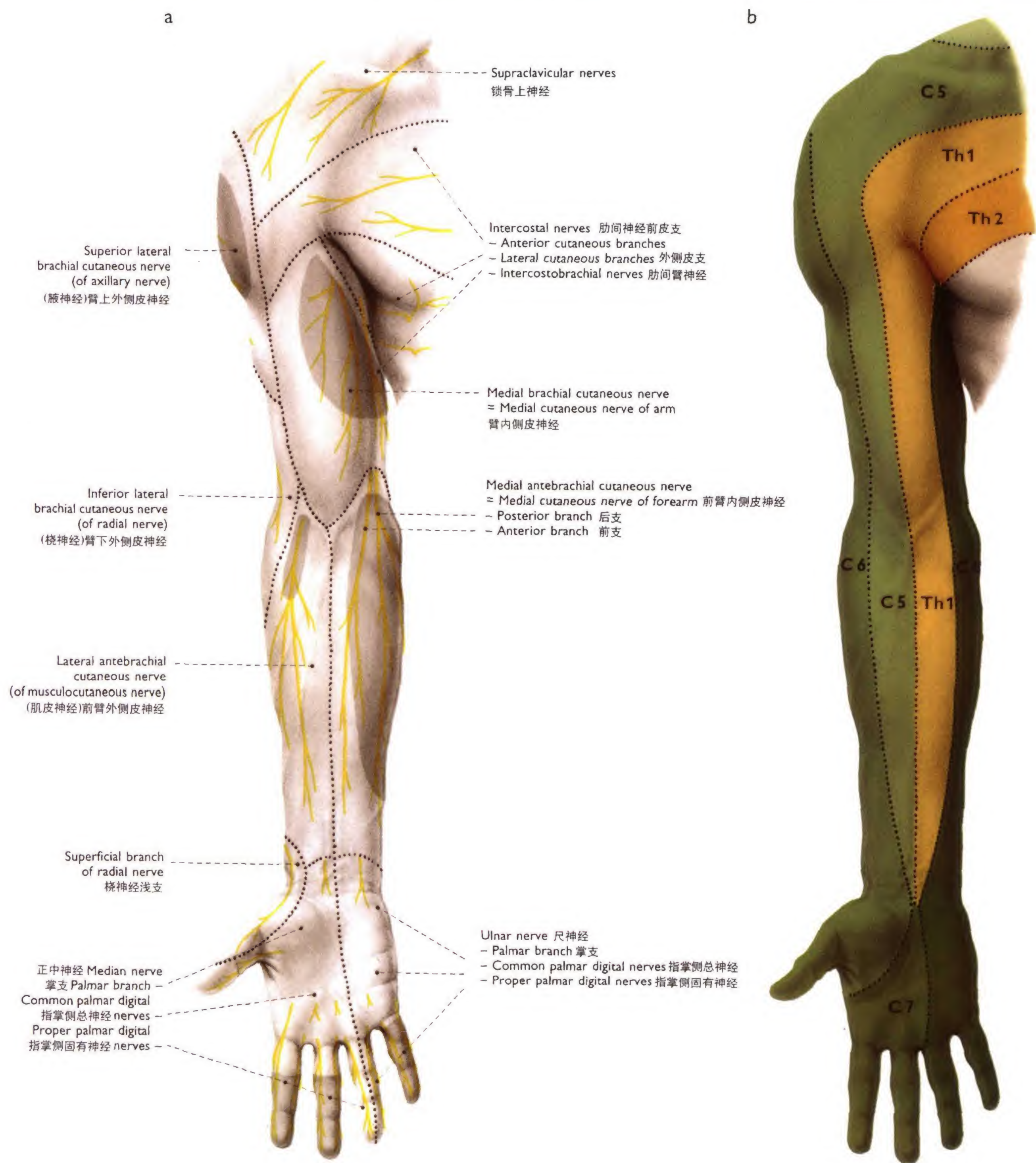
a Dorsal aspect 后面观
b Palmar aspect 前面观



131 Tendinous sheaths on the wrist
and the fingers of the right hand (40%) 右手手指和腕的腱鞘

Palmar aspect 前面观

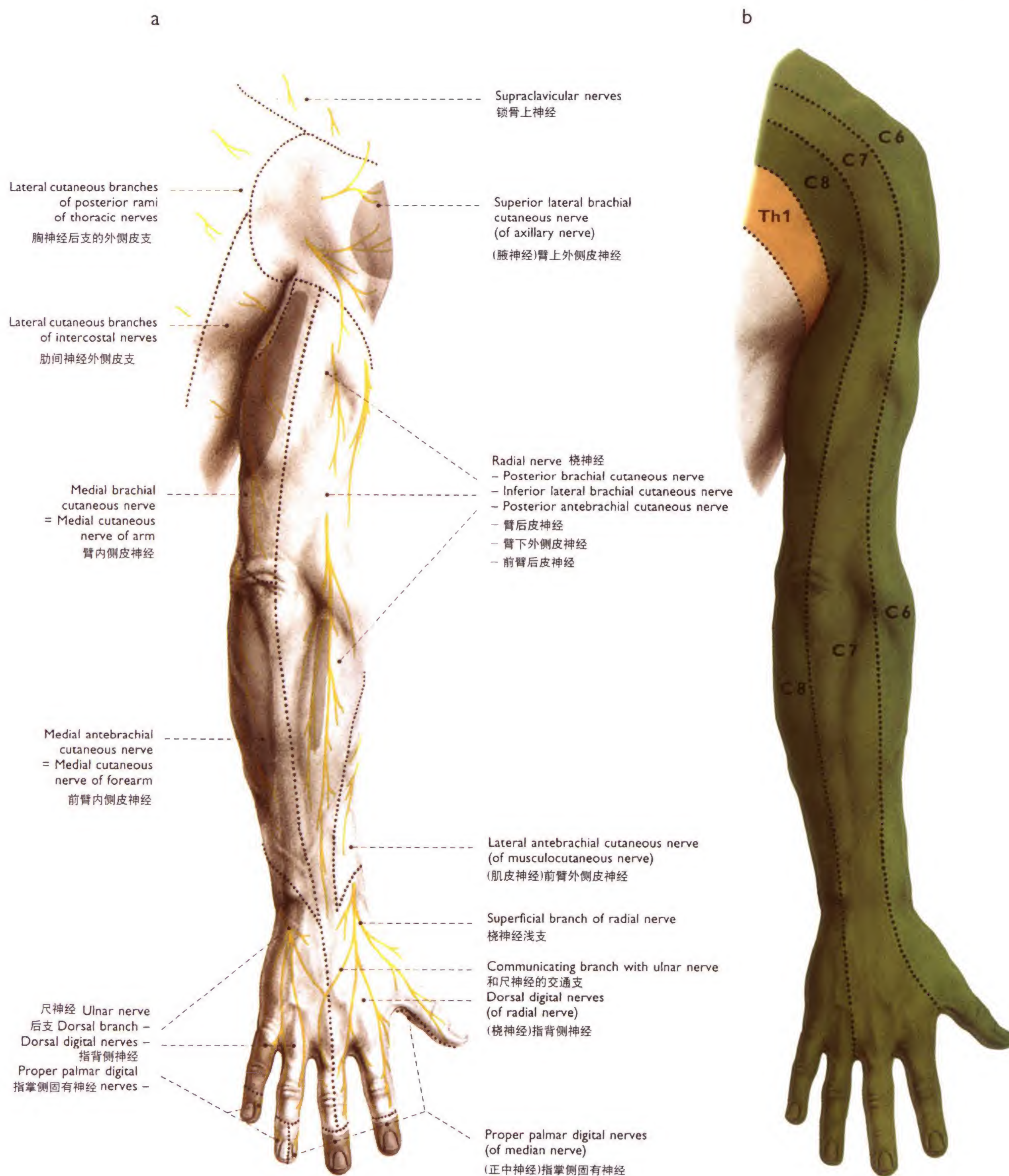
- a Usual arrangement 一般情况
- b Most common variation 常见变异
- c Other common variation 其他变异
- d V-phlegmona following an abscess at the distal phalanx
of the thumb or the little finger 拇指或小指末端脓肿继发V-蜂窝织炎



132 Cutaneous and segmental innervation of the right upper limb (25%) 右上肢皮神经及节段性分布

Schematic representations, ventral aspect 示意图, 前面观

- a Cutaneous nerves and areas of distribution, the autonomic areas of the different nerves are given in a darker gray. 皮神经及分布区
- b Segmental innervation (dermatomes) 节段性分布(皮区)

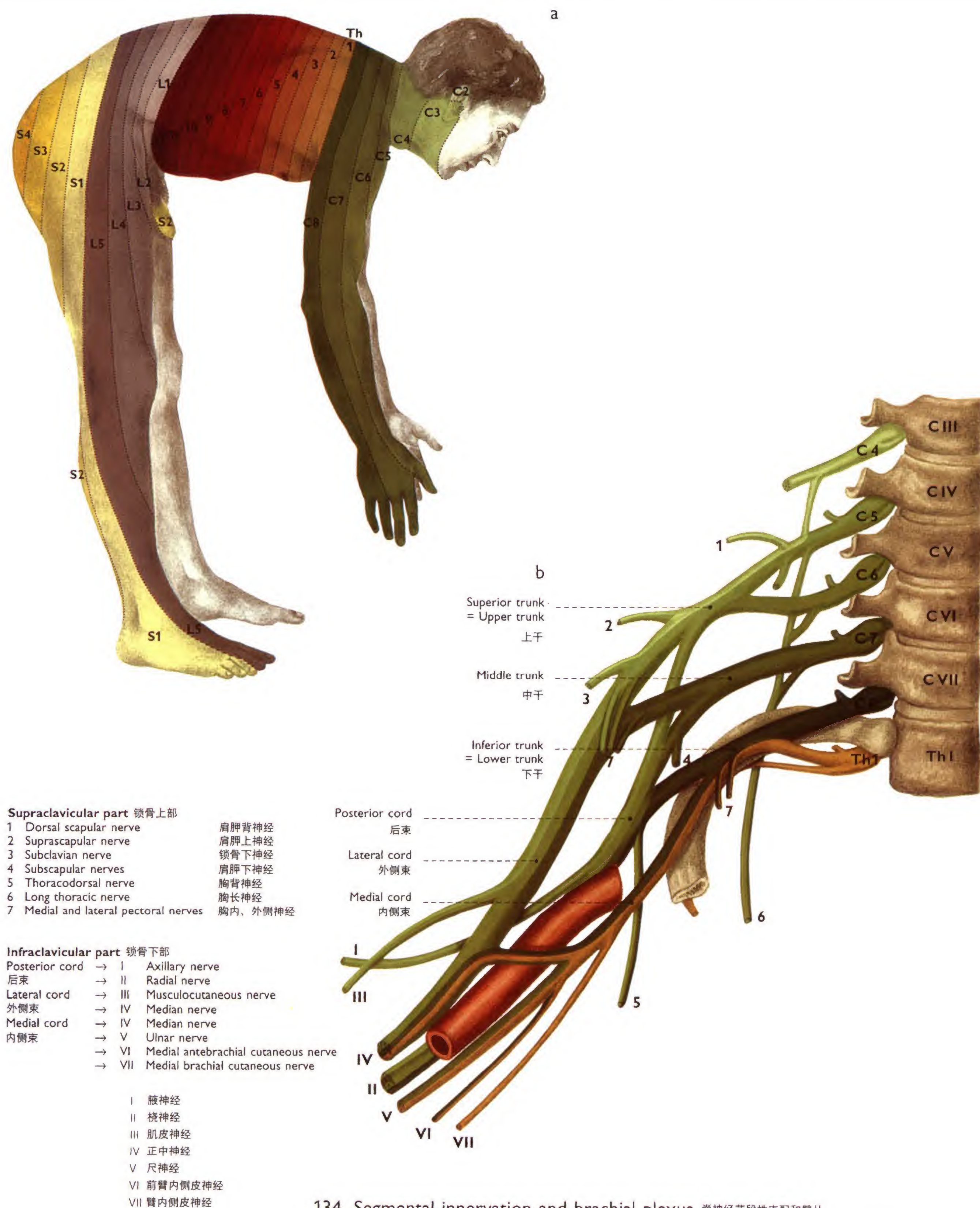


133 Cutaneous and segmental innervation

of the right upper limb (25%) 右上肢皮神经及节段性分布

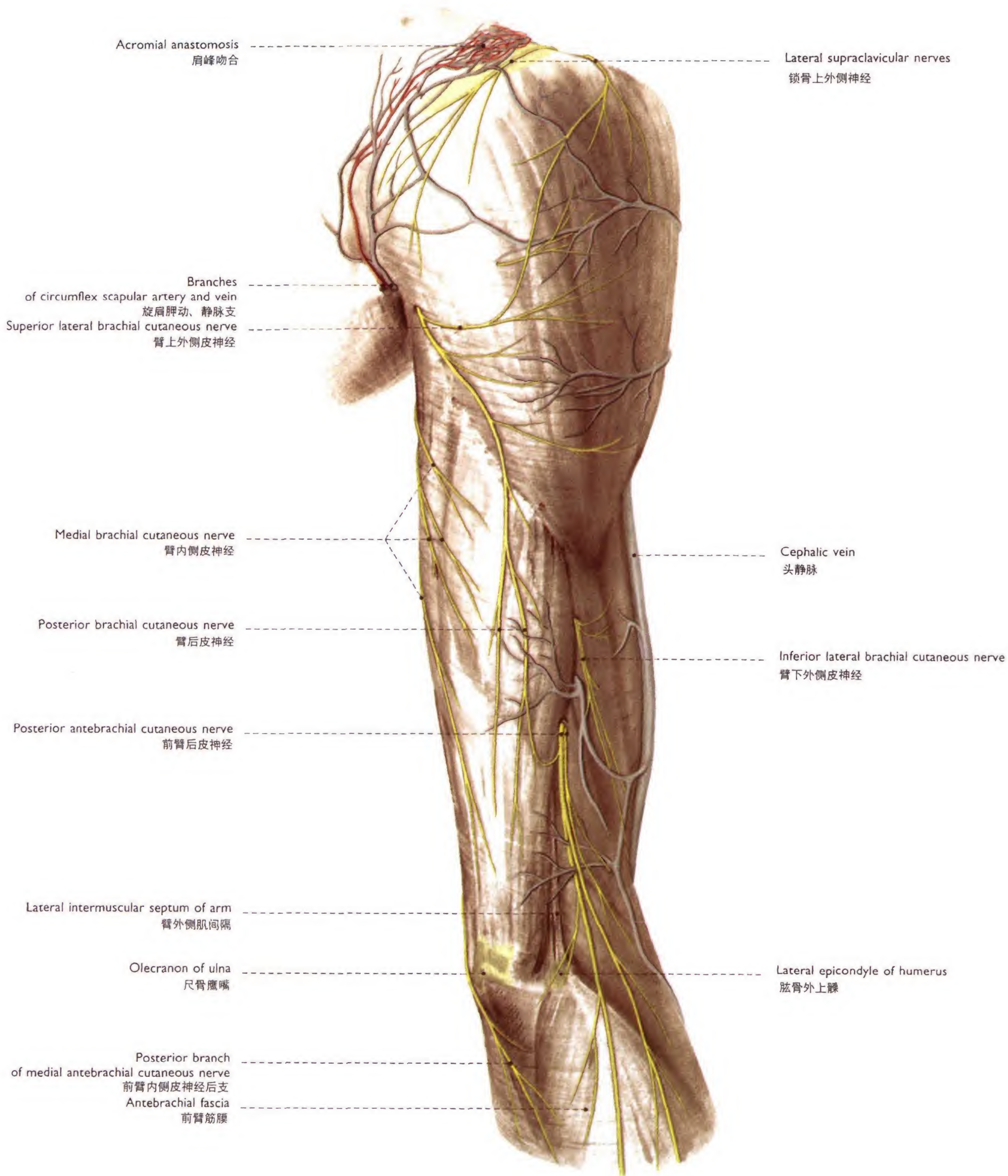
Schematic representations, dorsal aspect 示意图, 后面观

- a Cutaneous nerves and areas of distribution, the autonomic areas of the different nerves are given in a darker gray. 皮神经及其分布, 不同神经支配区分别用暗灰色表示
- b Segmental innervation (dermatomes) 节段性支配



134 Segmental innervation and brachial plexus 脊神经节段性支配和臂丛

- a Segmental innervation (dermatomes) of the upper limb, trunk, 上肢、躯干和下肢脊神经节段性支配 and lower limb (according to von Lanz and Wachsmuth, 1959) (参照 Von Lanz和Lanz和Wachsmuth, 1959)
- b Plan of the brachial plexus 臂丛

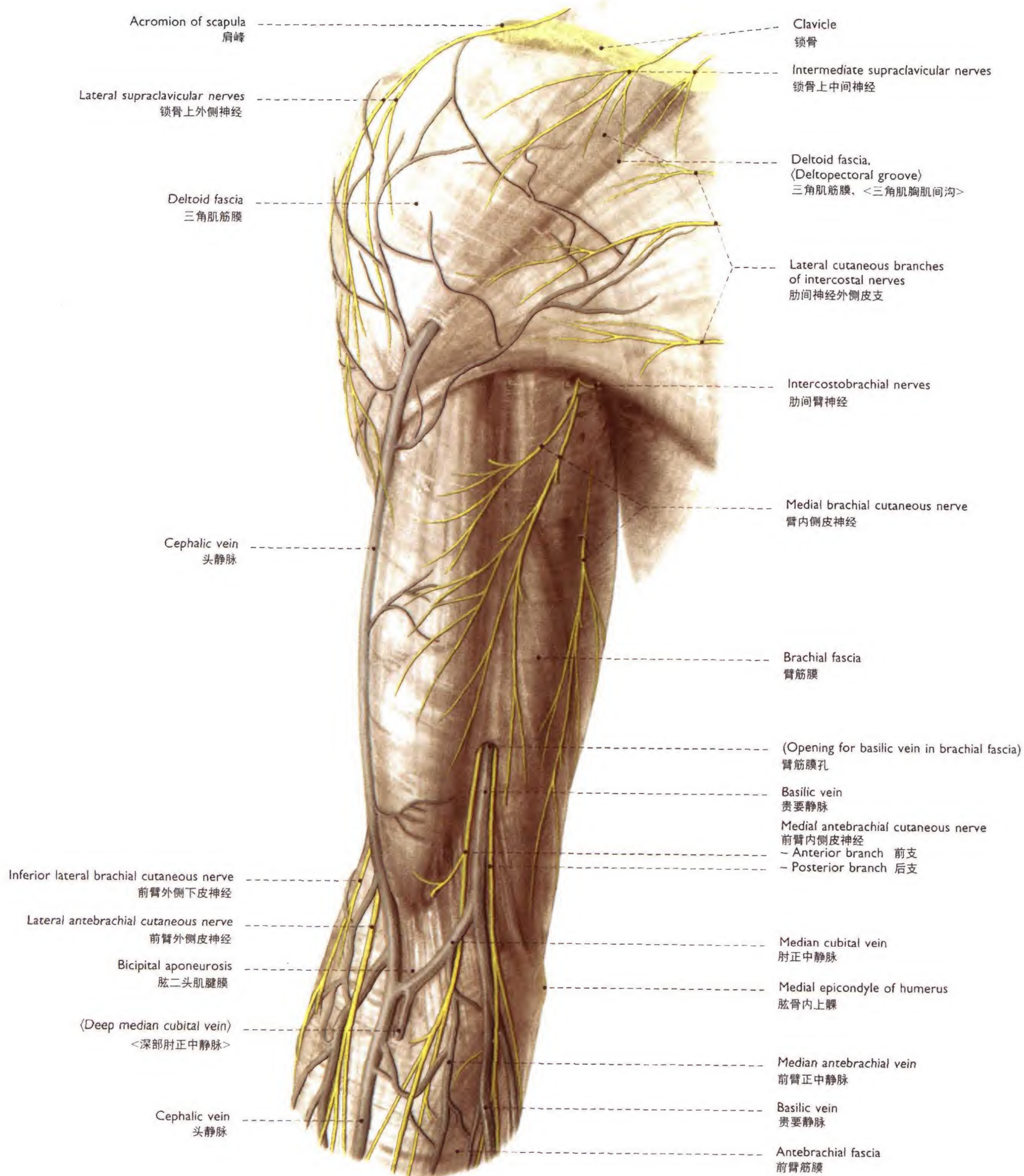


135 Subcutaneous veins and nerves of the right shoulder and the right arm (50%)

右肩和右臂的浅静脉和皮神经

In this case the inferior lateral brachial cutaneous nerve

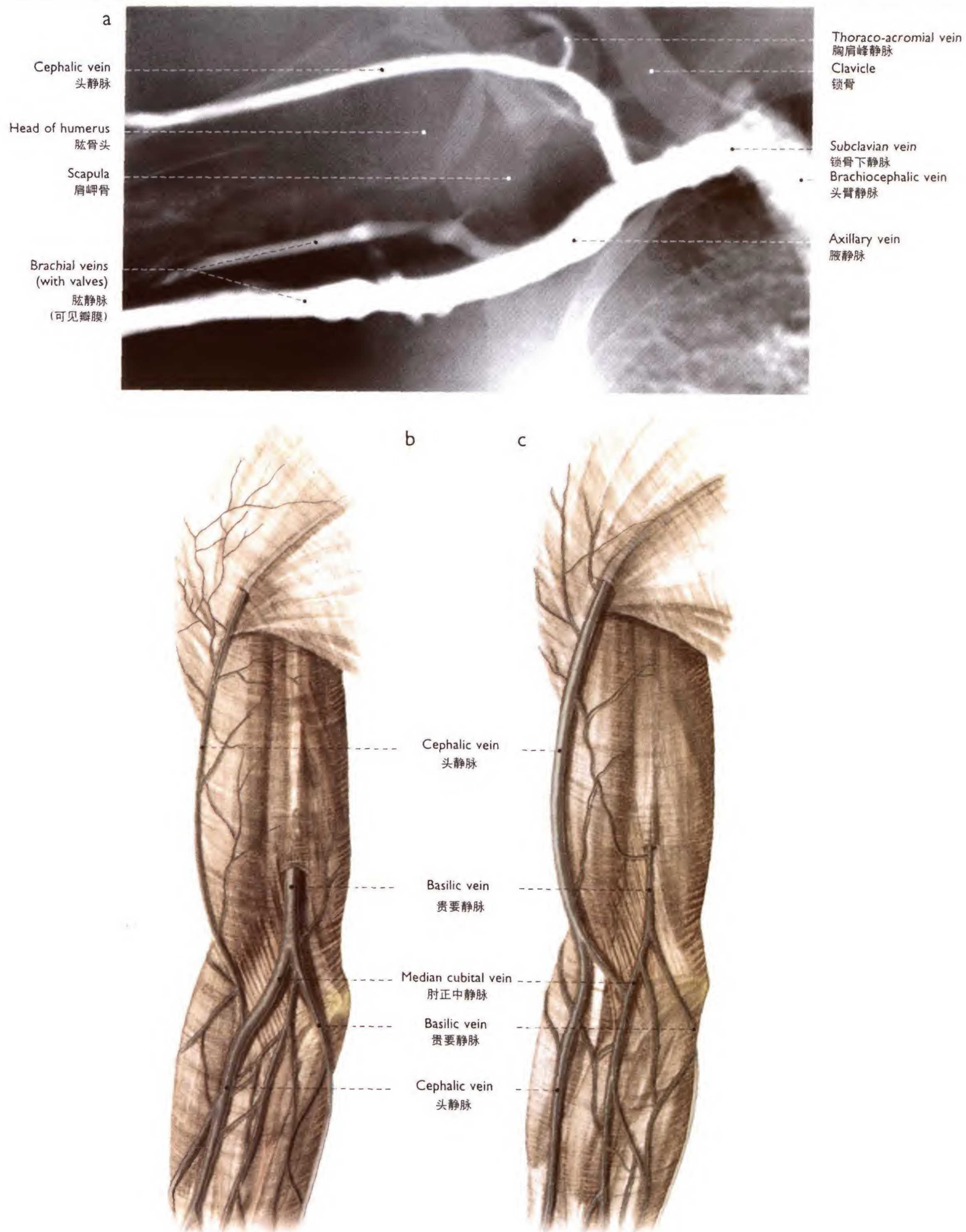
originates from the axillary nerve. Dorsolateral aspect 图中臂外侧下皮神经来自腋神经，后外侧观



136 Subcutaneous veins and nerves of the

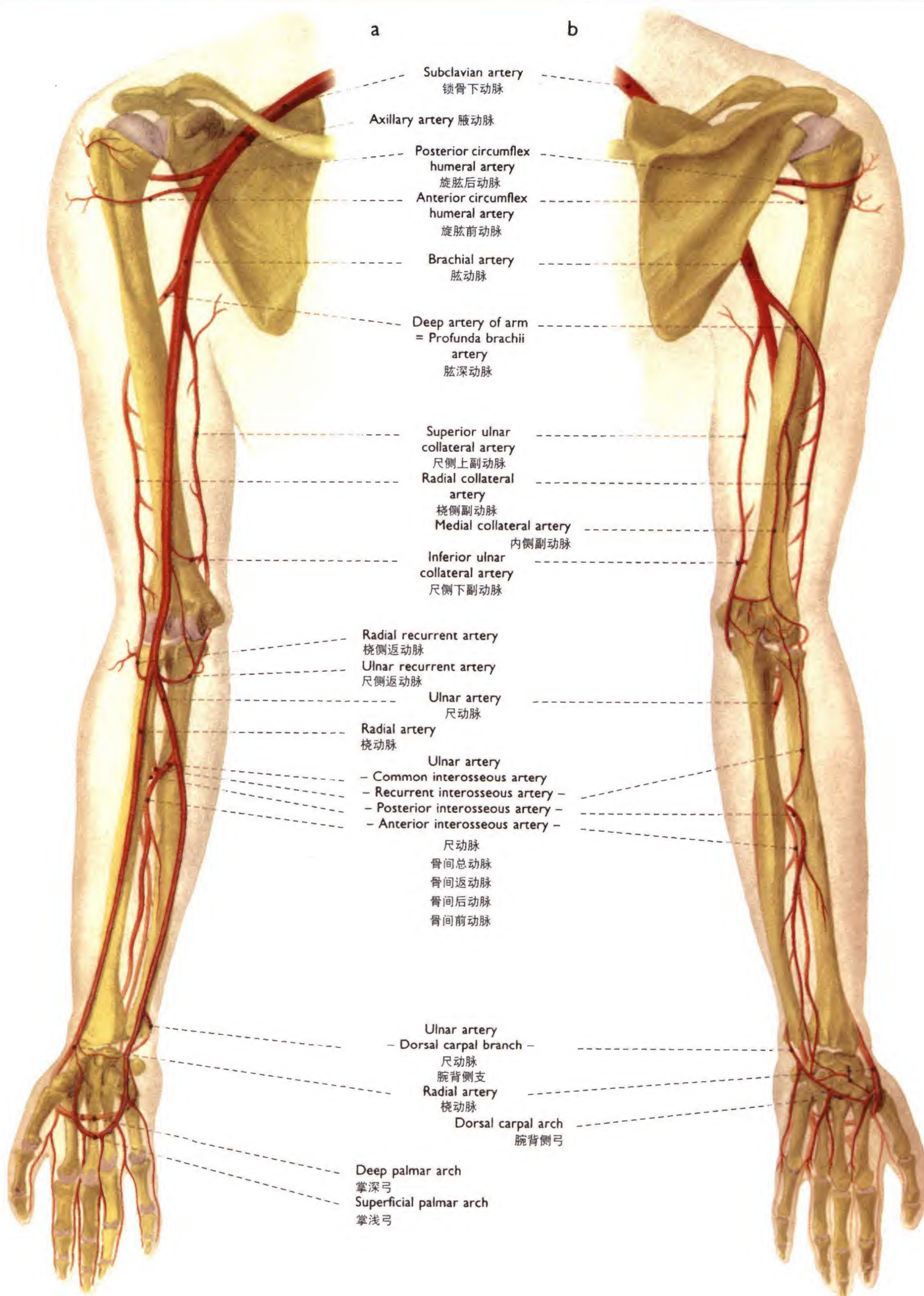
right shoulder and the right arm (50%) 右肩和右臂的浅静脉和皮神经

Ventral aspect 前面观



137 Subcutaneous veins of the right shoulder, the right arm and forearm 右肩, 右臂和前臂的浅静脉

- a** Phlebogram of the veins of the arm and the axilla (50%) 腋部和臂部静脉造影照片
- b, c** Common variations of the subcutaneous veins of the arm and the anterior region of elbow (30%), ventral aspect 臂和肘前区浅静脉的常见变异, 前面观

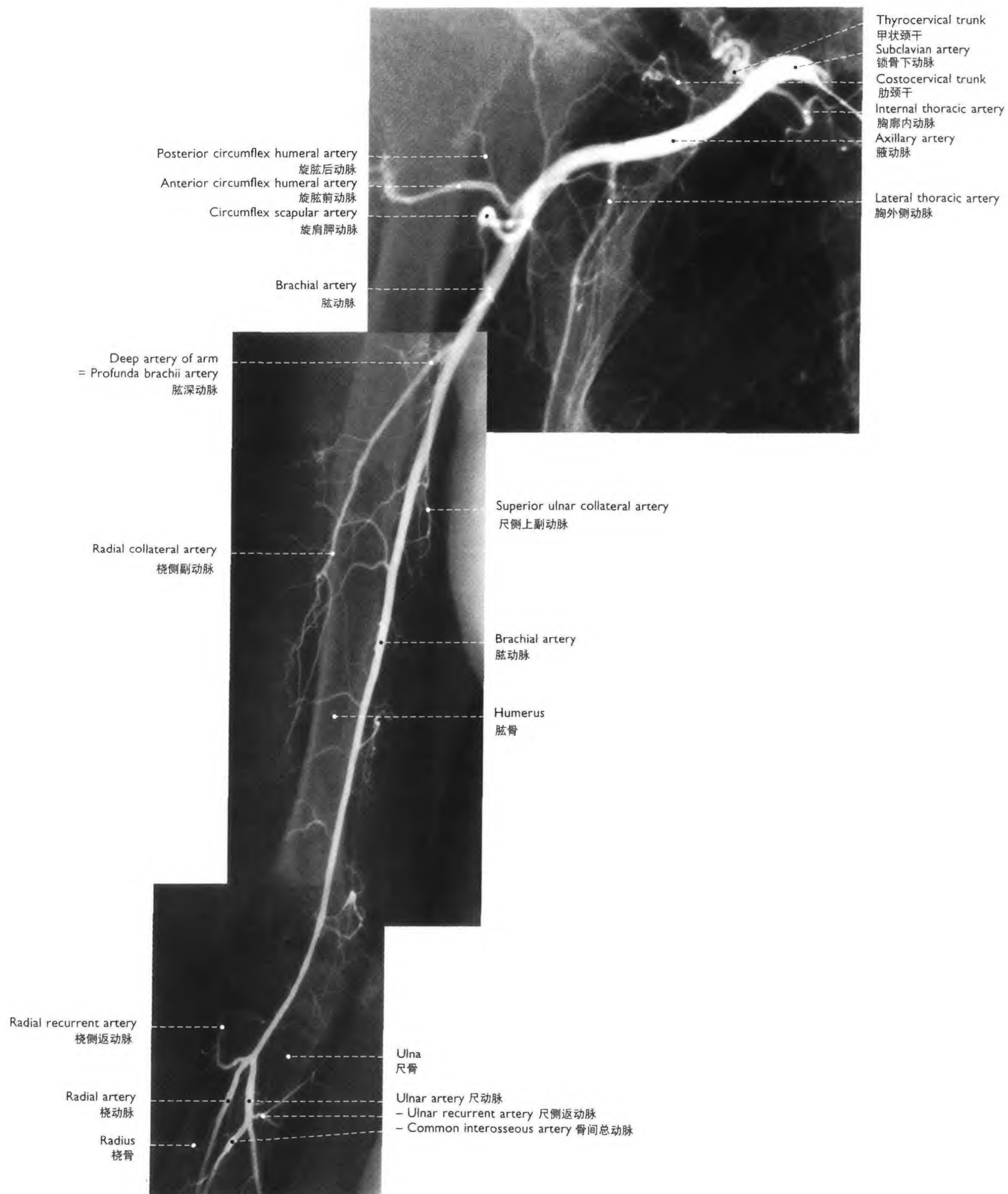


138 Arteries of the right upper limb (30%) 右侧上肢动脉

Schematic representations 示意图

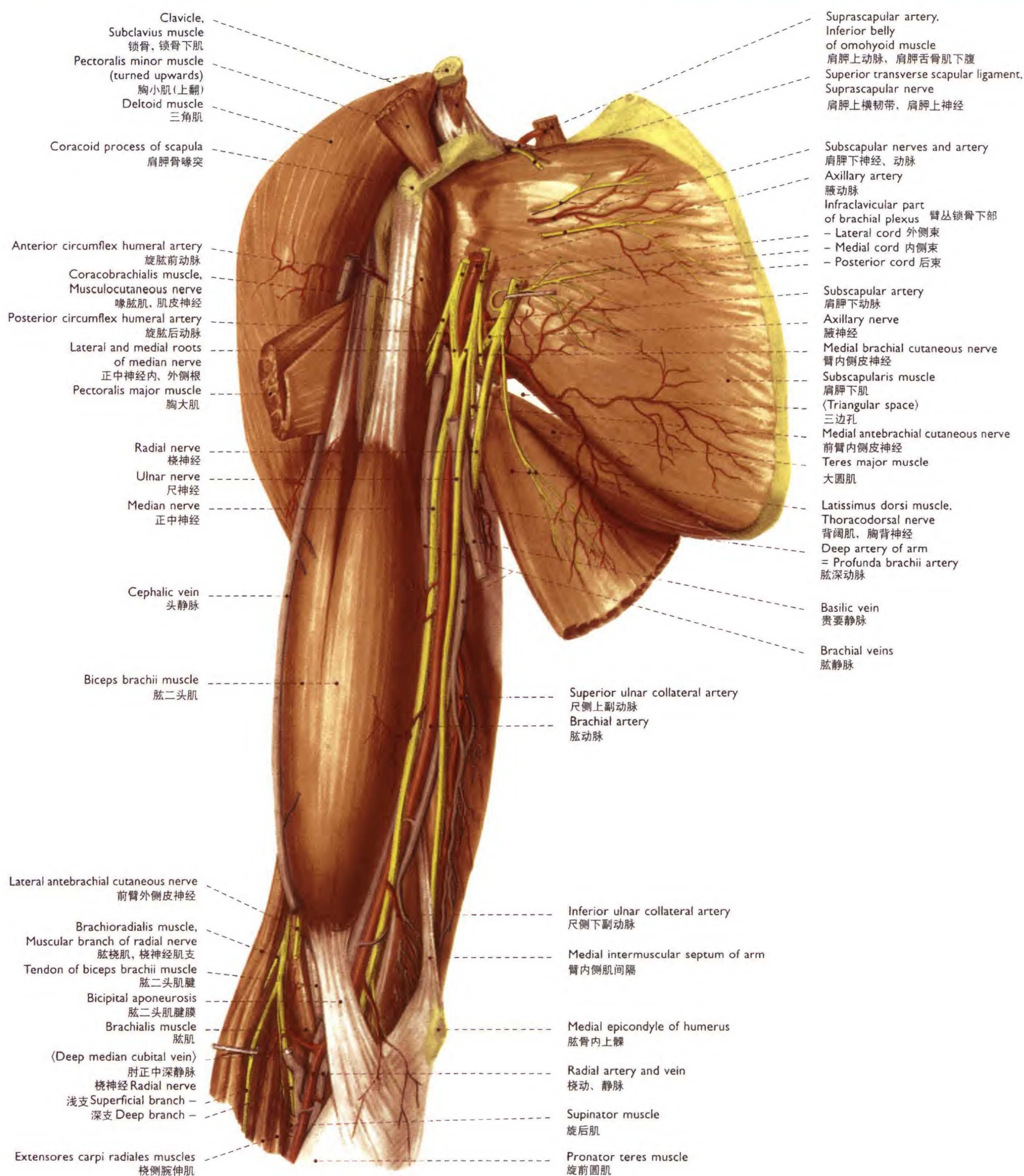
a Ventral aspect 前面观

b Dorsal aspect 后面观

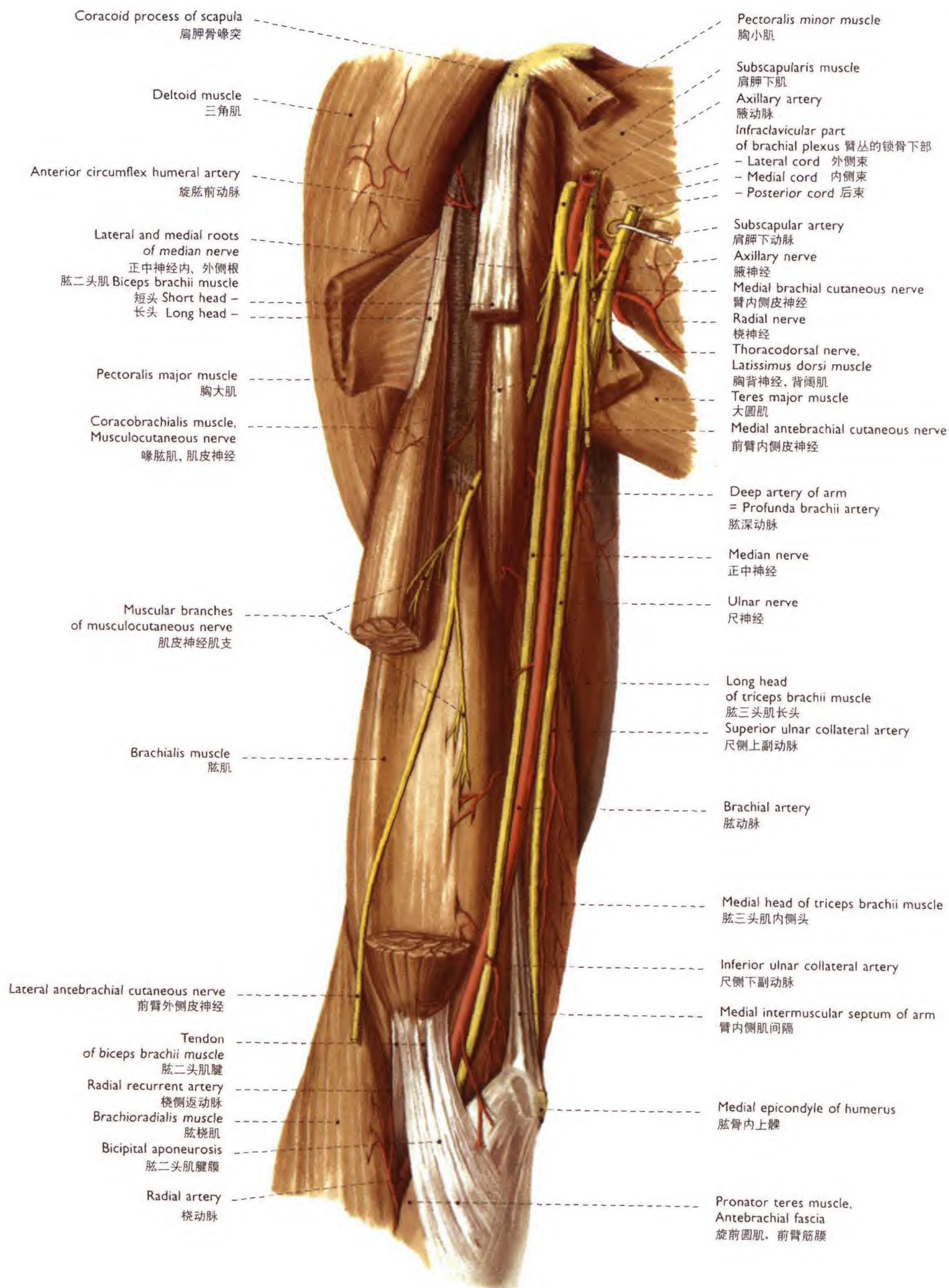


139 Arteries of the right upper limb (50%) 右上肢动脉

Arteriogram of the arteries of the upper limb 上肢动脉造影照片
(subclavian, axillary, brachial, radial, and ulnar arteries)(锁骨下、腋、肱、桡和尺动脉)



140 Blood vessels and nerves of the right shoulder, the arm, and the anterior region of elbow (50%) 右肩、臂、肘前区的血管和神经
Ventral aspect 前面观

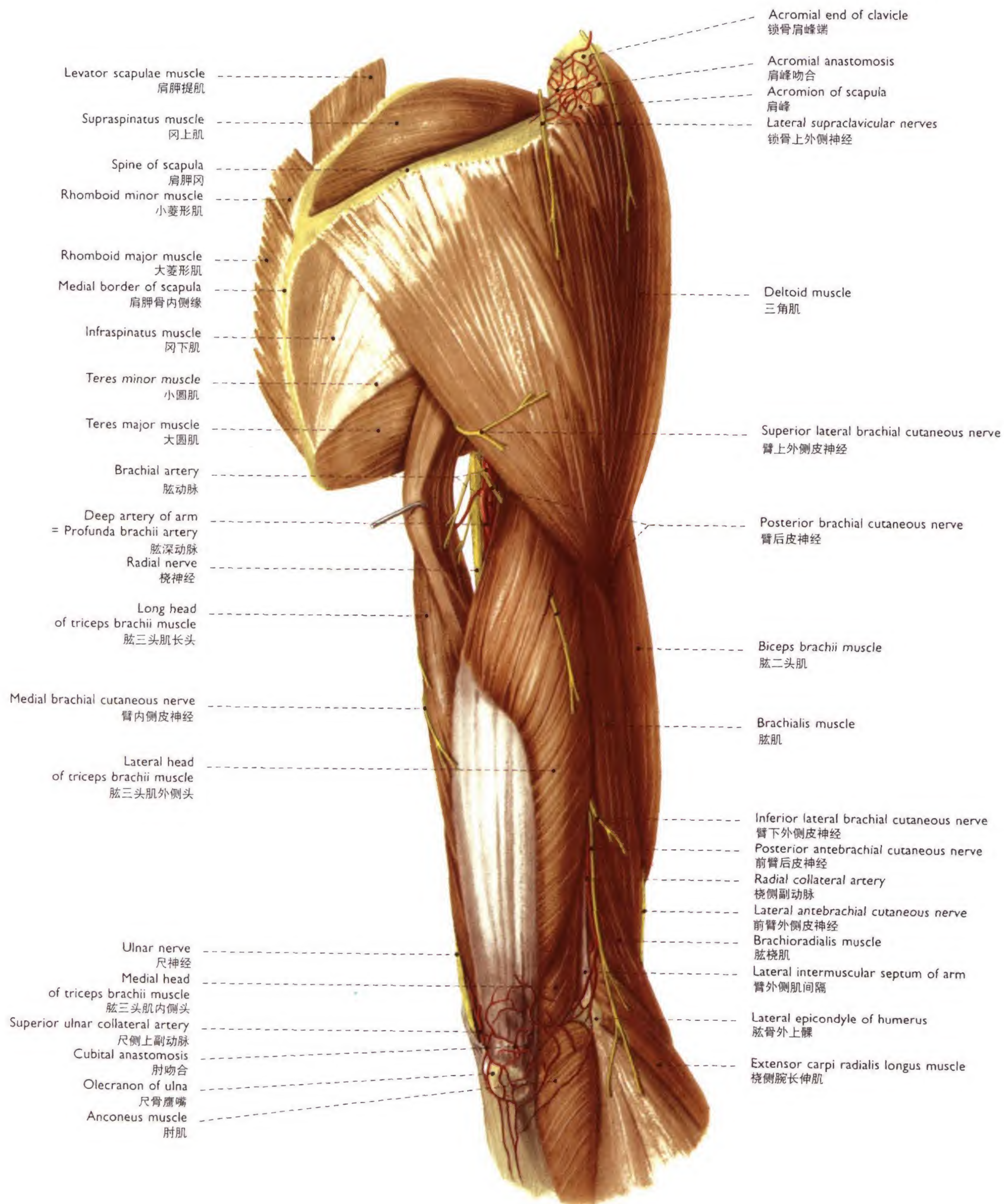


141 Arteries and nerves of the right arm

and the anterior region of elbow (50%) 右臂和肘前区的血管和神经

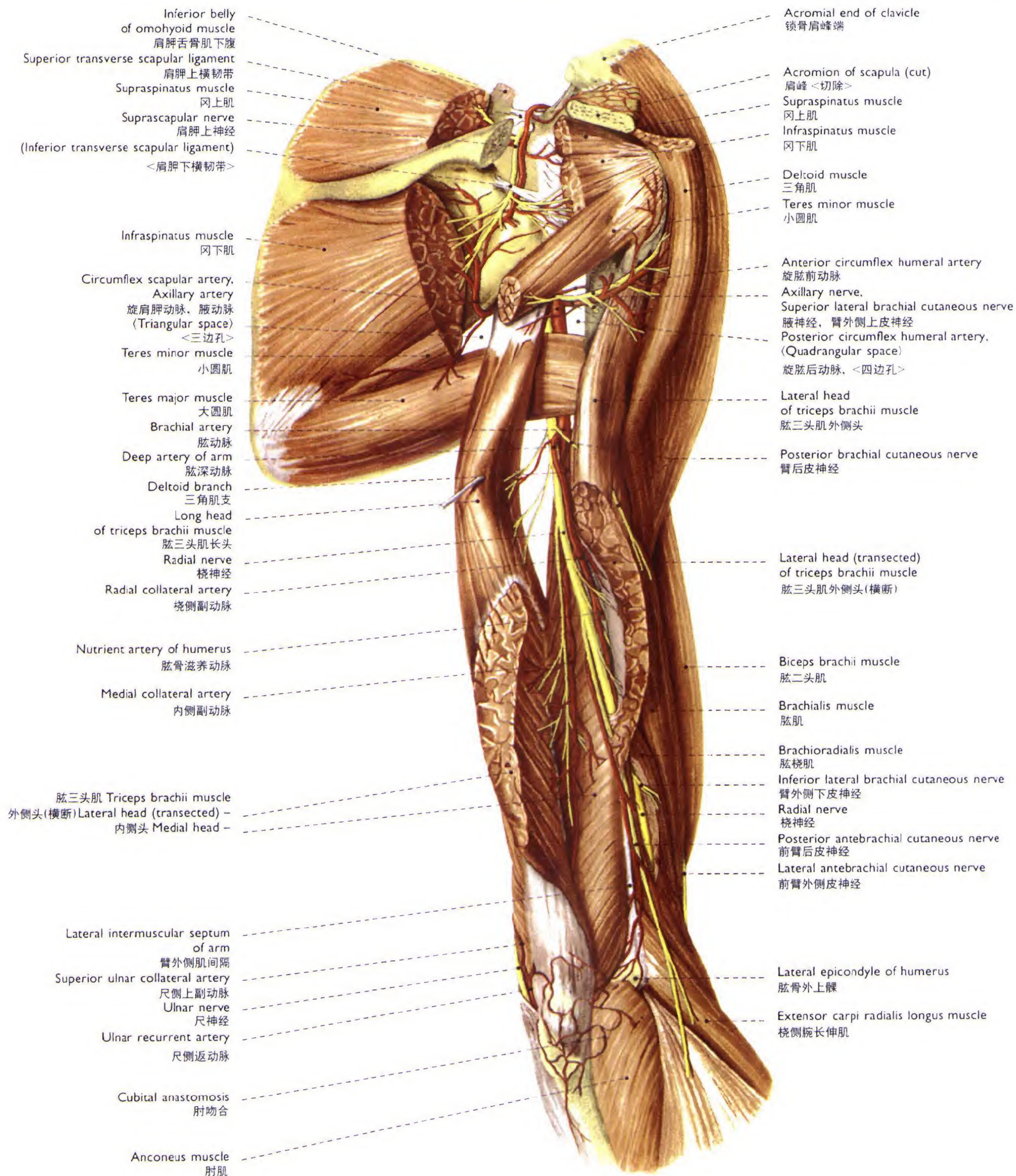
The biceps brachii muscle was partially removed. 部分切除肱二头肌

Ventral aspect 前面观

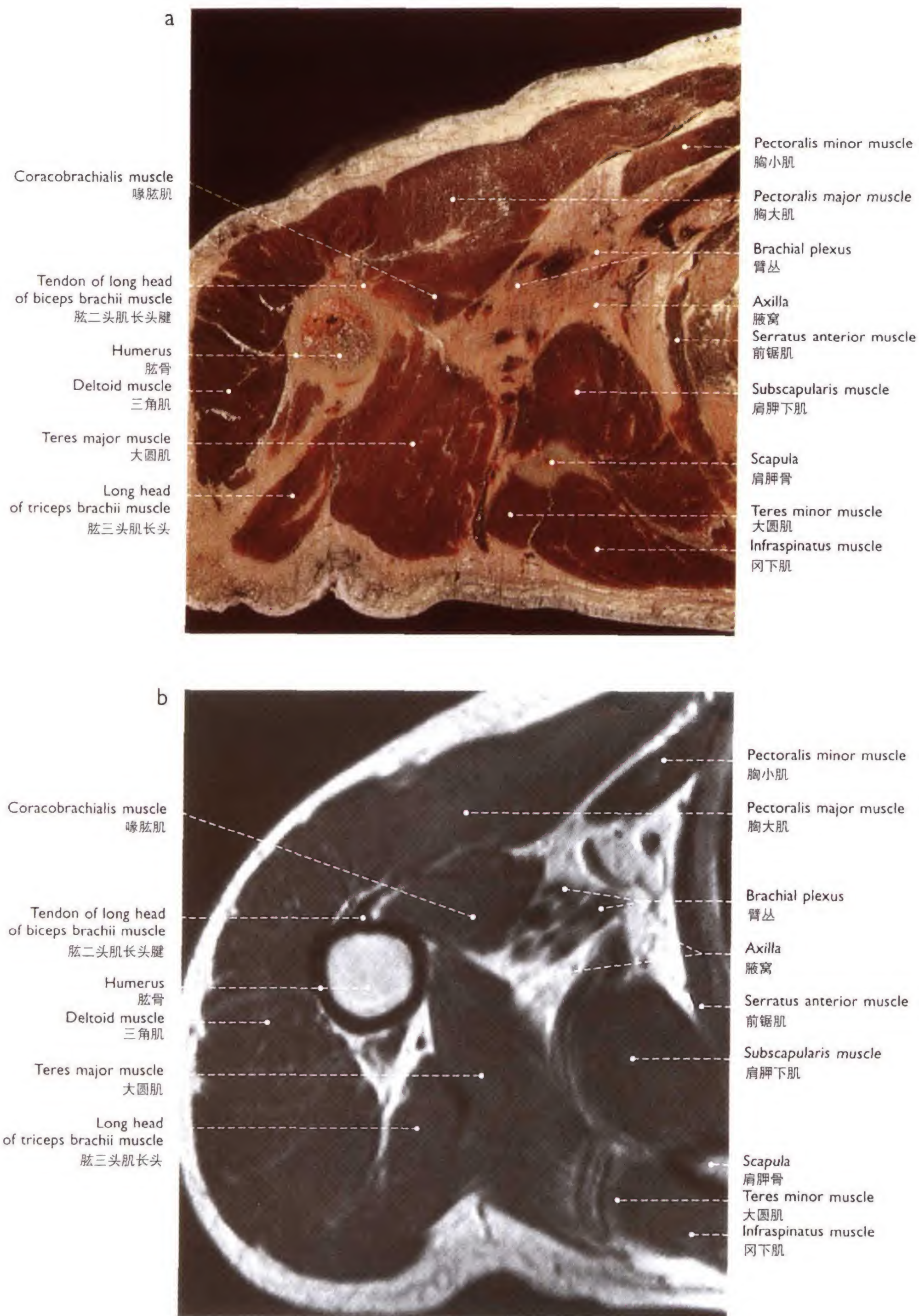


142 Arteries and nerves of the right shoulder, the right arm, and the posterior region of elbow (50%)

Dorsolateral aspect 右肩、臂和肘后区的动脉神经。后外侧面观



143 Arteries and nerves of the right shoulder, the right arm, and the posterior region of elbow (50%) 右肩、臂、肘后区的动脉和神经
The lateral head of the triceps brachii muscle was divided, the radial nerve channel opened. Dorsolateral aspect 肱三头肌外侧头已分离, 桡神经管已切开, 后外侧面观

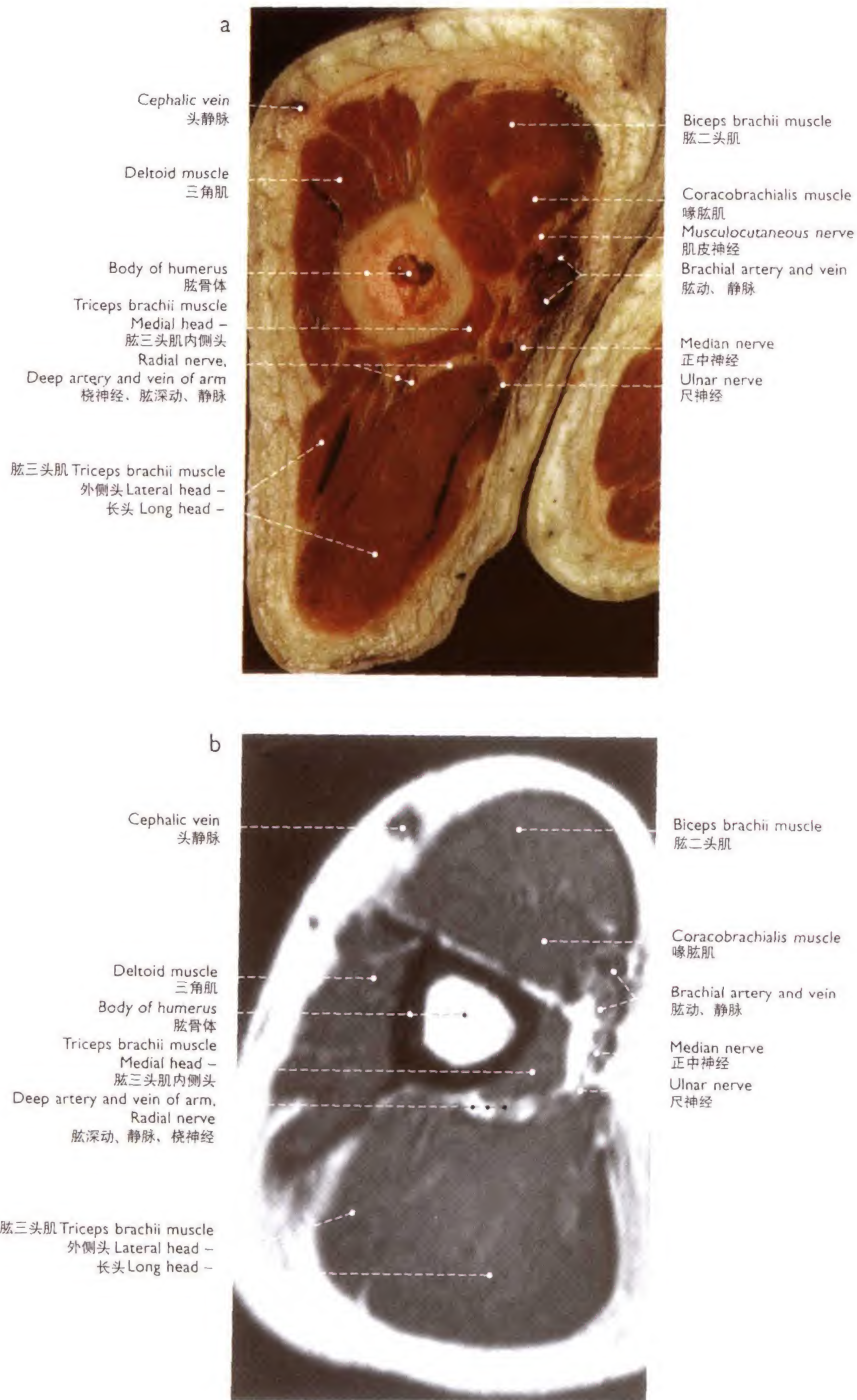


144 Right arm (80%) 右臂

Transverse sections through the proximal arm
at the level of the shoulder and the axilla, distal aspect 臂部上端经肩和腋窝水平横断，下面观

a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)

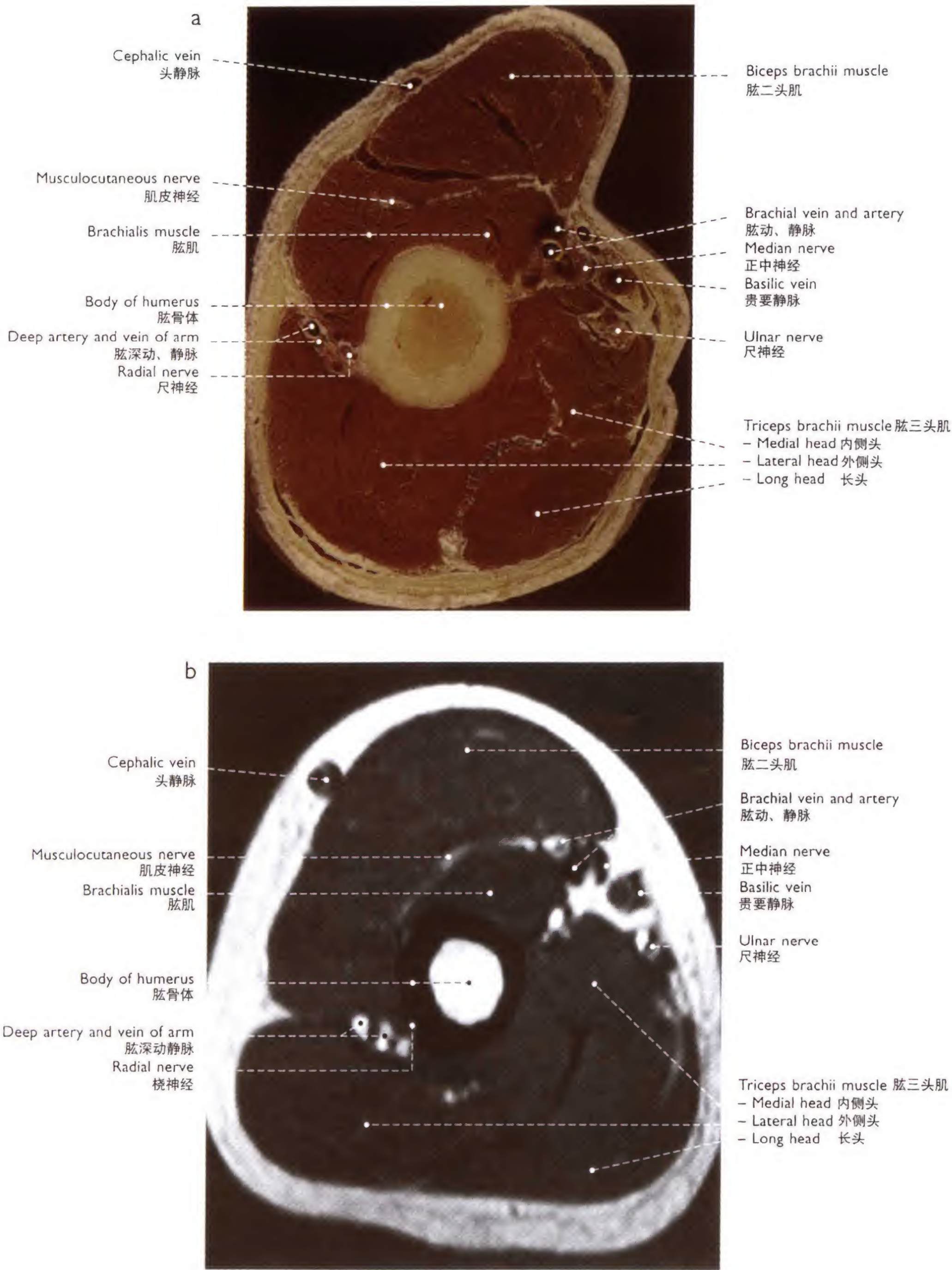


145 Right arm (80%) 右臂

Transverse sections through the proximal third of the arm, distal aspect 经臂上三分之一横断，下面观

a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)

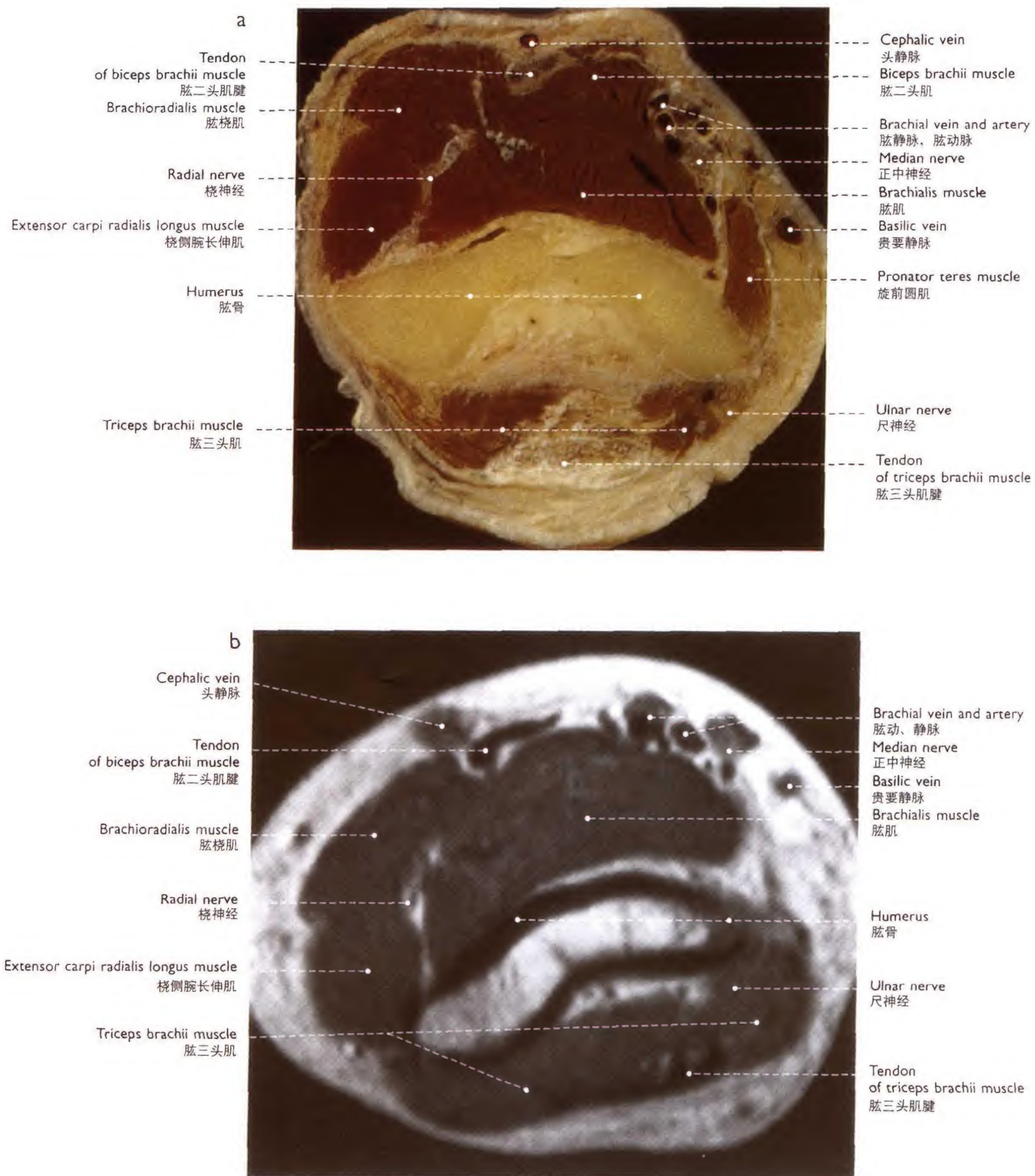


146 Right arm (100%) 右臂

Transverse sections through the middle third of the arm, distal aspect 经臂部中三分之一处横断，下面观

a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI,T₁加权)

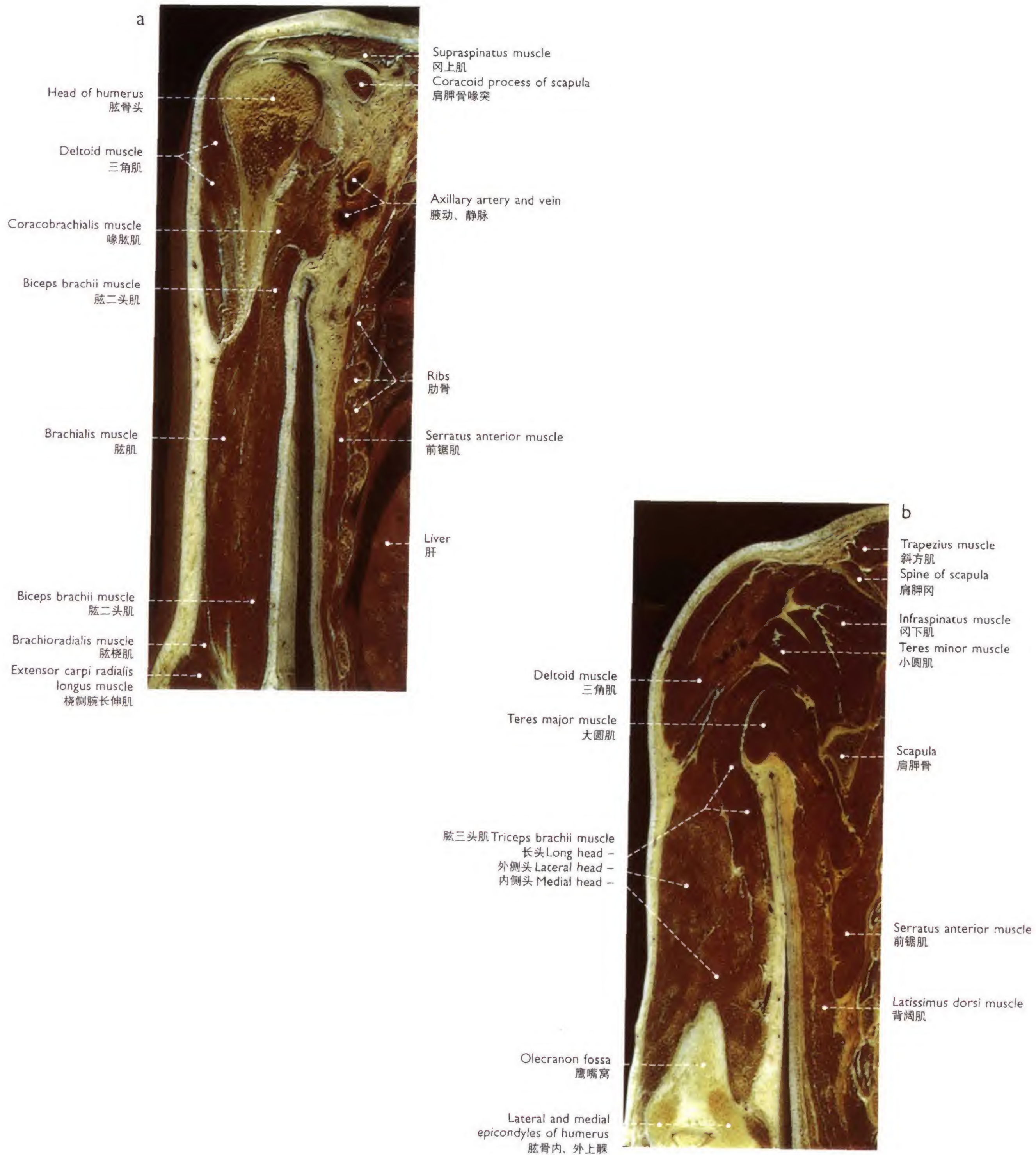


147 Right arm (100%) 右臂

Transverse sections through the distal third of the arm just above the elbow joint, distal aspect 经臂部下三分之一处，即肘关节上方横断。下面观

a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)



148 Right arm (35%) 右臂

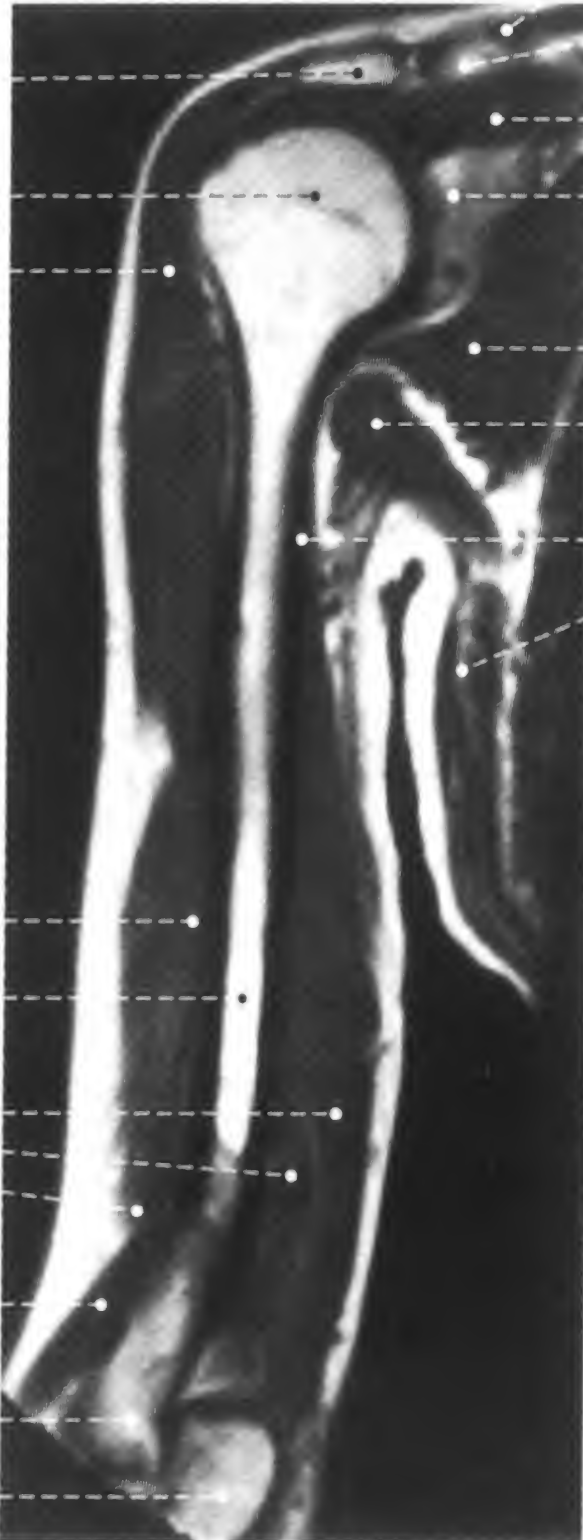
Coronal anatomical sections 冠状位解剖断面

- a through the ventral part (flexor compartment) 经前部(屈肌区)
- b through the dorsal part (extensor compartment) of the arm, ventral aspect 经臂后部(伸肌区), 前面观



a
Clavicle
锁骨
Coracoid process of scapula
肩胛骨喙突
Head of humerus
肱骨头
Axillary fossa
腋窝
Deltoid muscle
三角肌
Coracobrachialis muscle
喙肱肌
Biceps brachii muscle
肱二头肌

b
Acromion of scapula
肩峰
Head of humerus
肱骨头
Deltoid muscle
三角肌
Brachialis muscle
肱肌
Brachioradialis muscle
肱桡肌
Extensor carpi radialis longus muscle
桡侧腕长伸肌
Capitulum of humerus
肱骨小头
Trochlea of humerus
肱骨滑车
Brachialis muscle
肱骨
Body of humerus
肱骨体
肱三头肌 Triceps brachii muscle
长头 Long head -
内侧头 Medial head -
外侧头 Lateral head -
Brachioradialis muscle
肱桡肌
Capitulum of humerus
肱骨小头
Olecranon of ulna
尺骨鹰嘴



Clavicle
锁骨
Trapezius muscle
斜方肌
Supraspinatus muscle
冈上肌
Scapula
肩胛骨
Subscapularis muscle
肩胛下肌
Teres major muscle
大圆肌
Coracobrachialis muscle
喙肱肌
Latissimus dorsi muscle
背阔肌

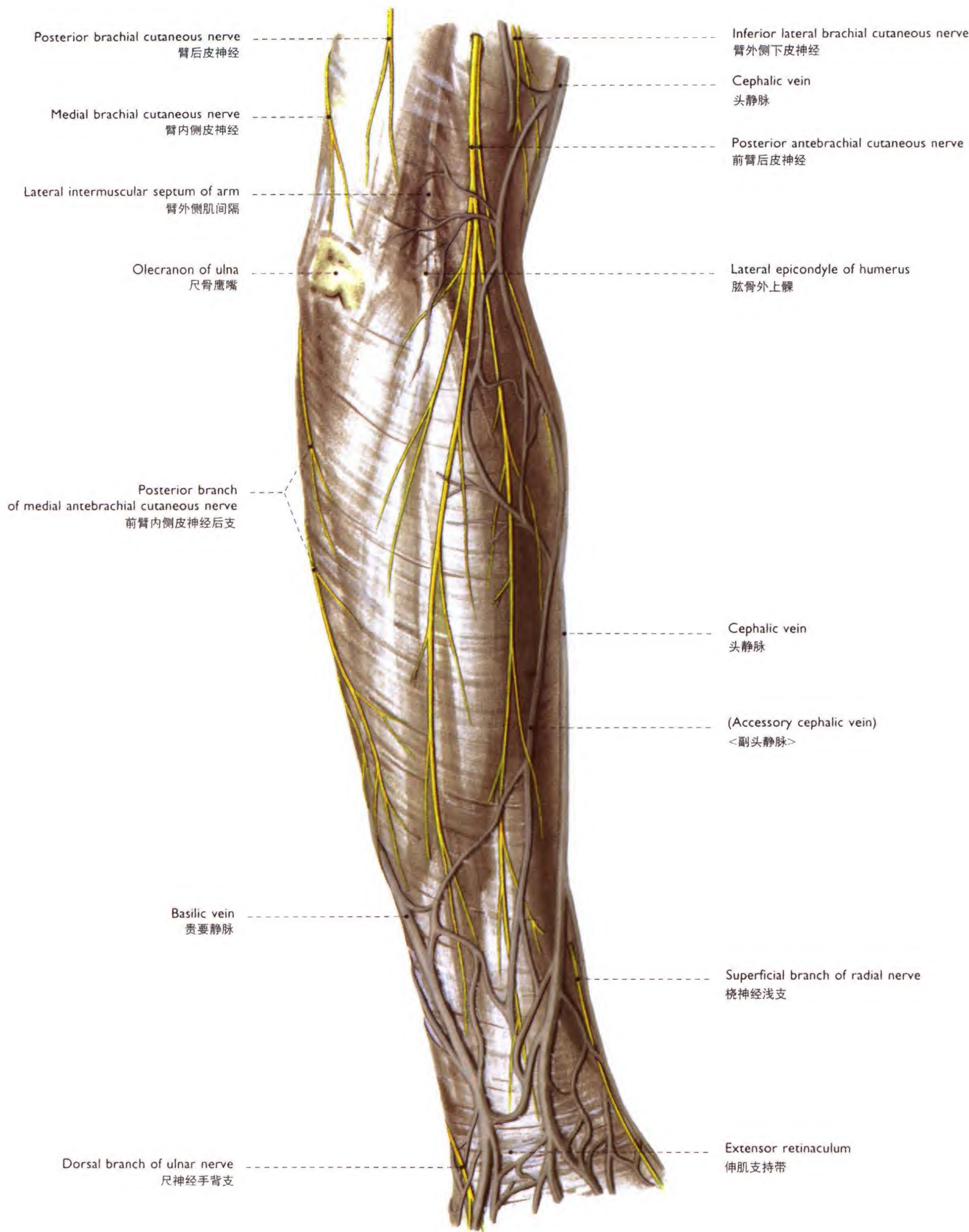
c
Trapezius muscle
斜方肌
Acromion of scapula
肩峰
Head of humerus
肱骨头
Scapula
肩胛骨
Deltoid muscle
三角肌
Teres major muscle
大圆肌
Triceps brachii muscle
肱三头肌
长头 Long head -
外侧头 Lateral head -
Latissimus dorsi muscle
背阔肌



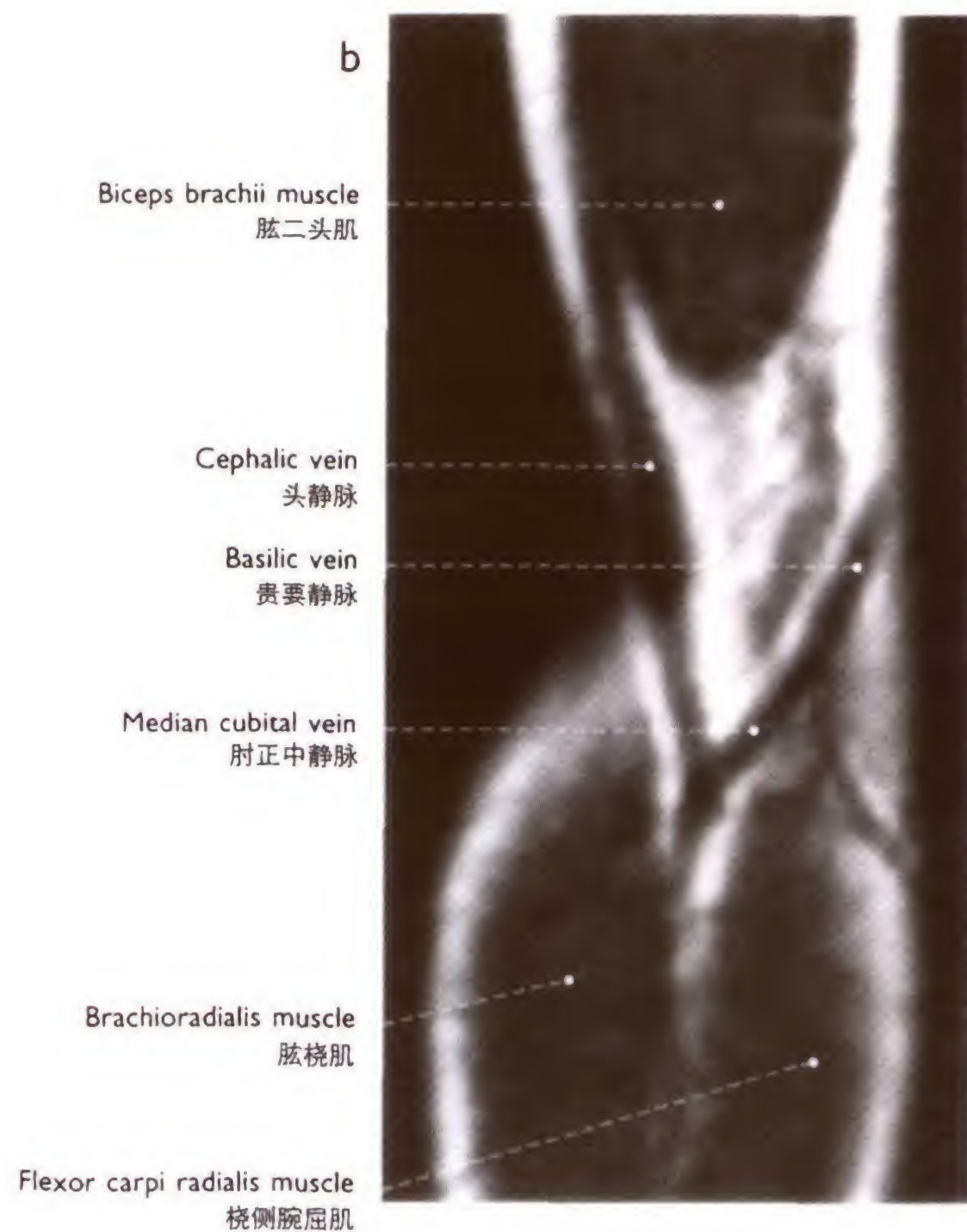
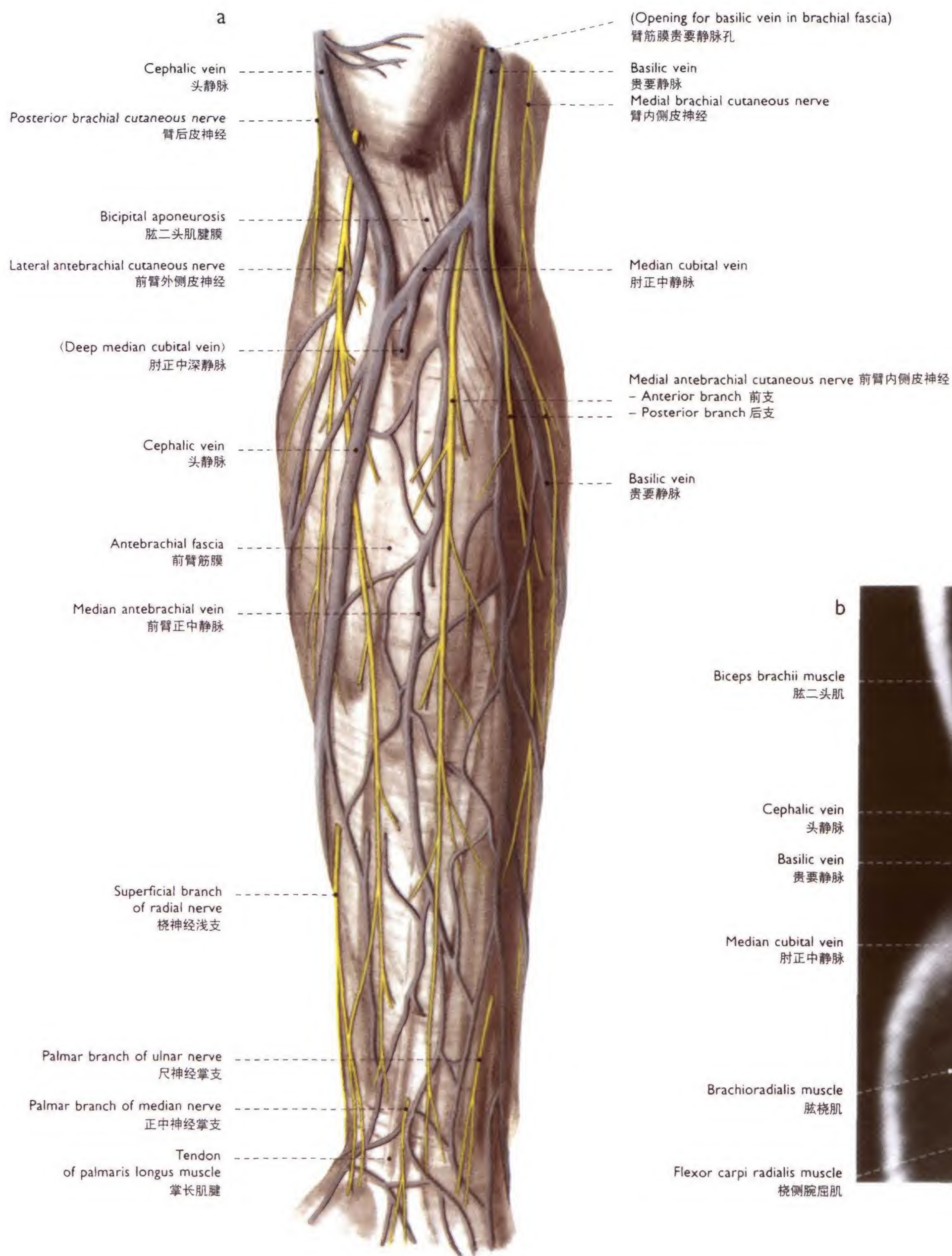
149 Right arm (30%) 右臂

Coronal magnetic resonance images (MRI, T₁-weighted) 冠状位磁共振成像(MRI, T₁加权)

- a through the ventral part (flexor compartment) 经前部(屈肌区)
- b through the middle part 经中部
- c through the dorsal part (extensor compartment) of the arm, ventral aspect 经臂后部(伸肌区), 前面观



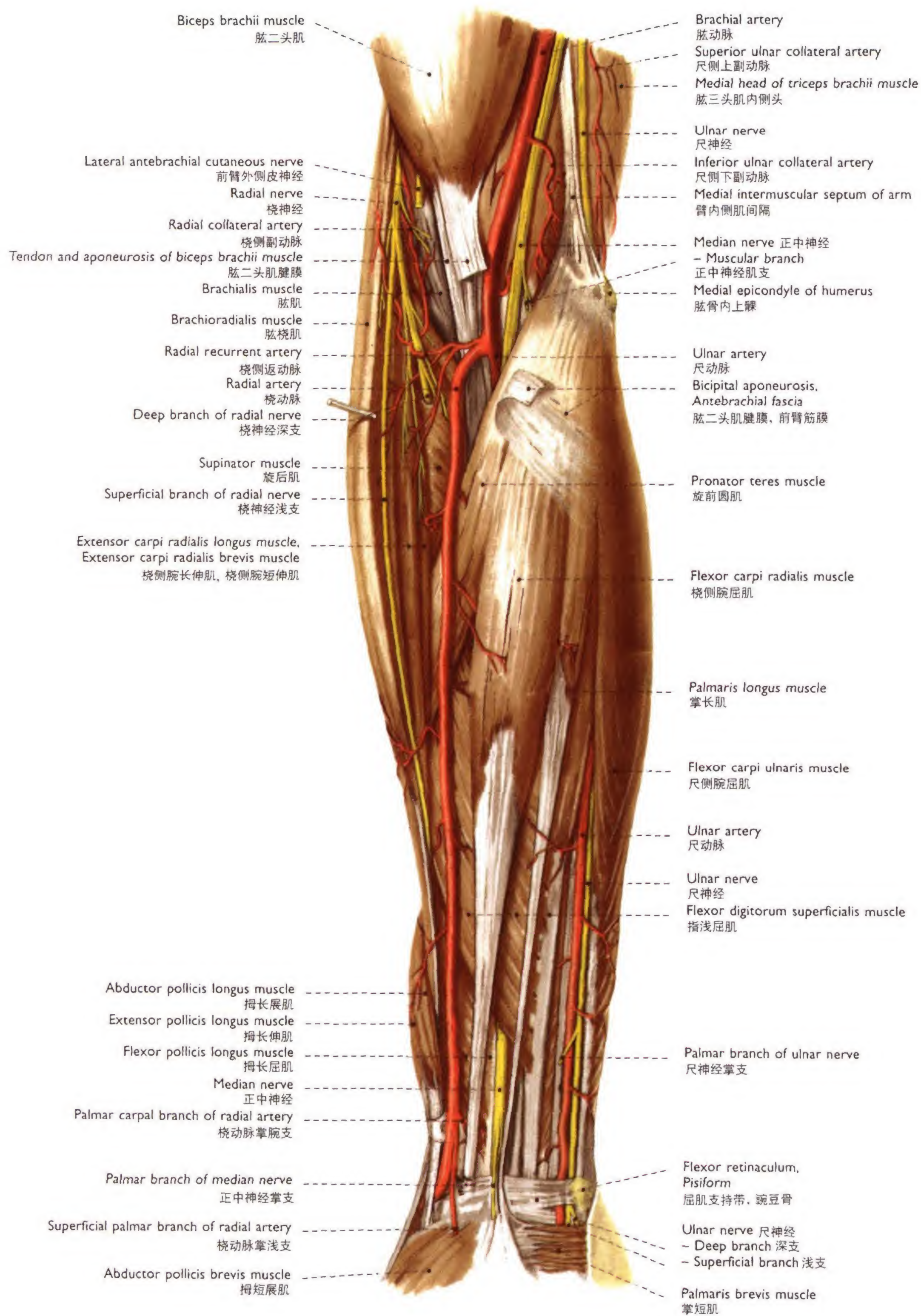
150 Subcutaneous veins and nerves of the posterior (extensor) region of the right forearm (50%) 前臂后(伸)区的浅静脉和皮神经
Dorsolateral aspect 后外侧观



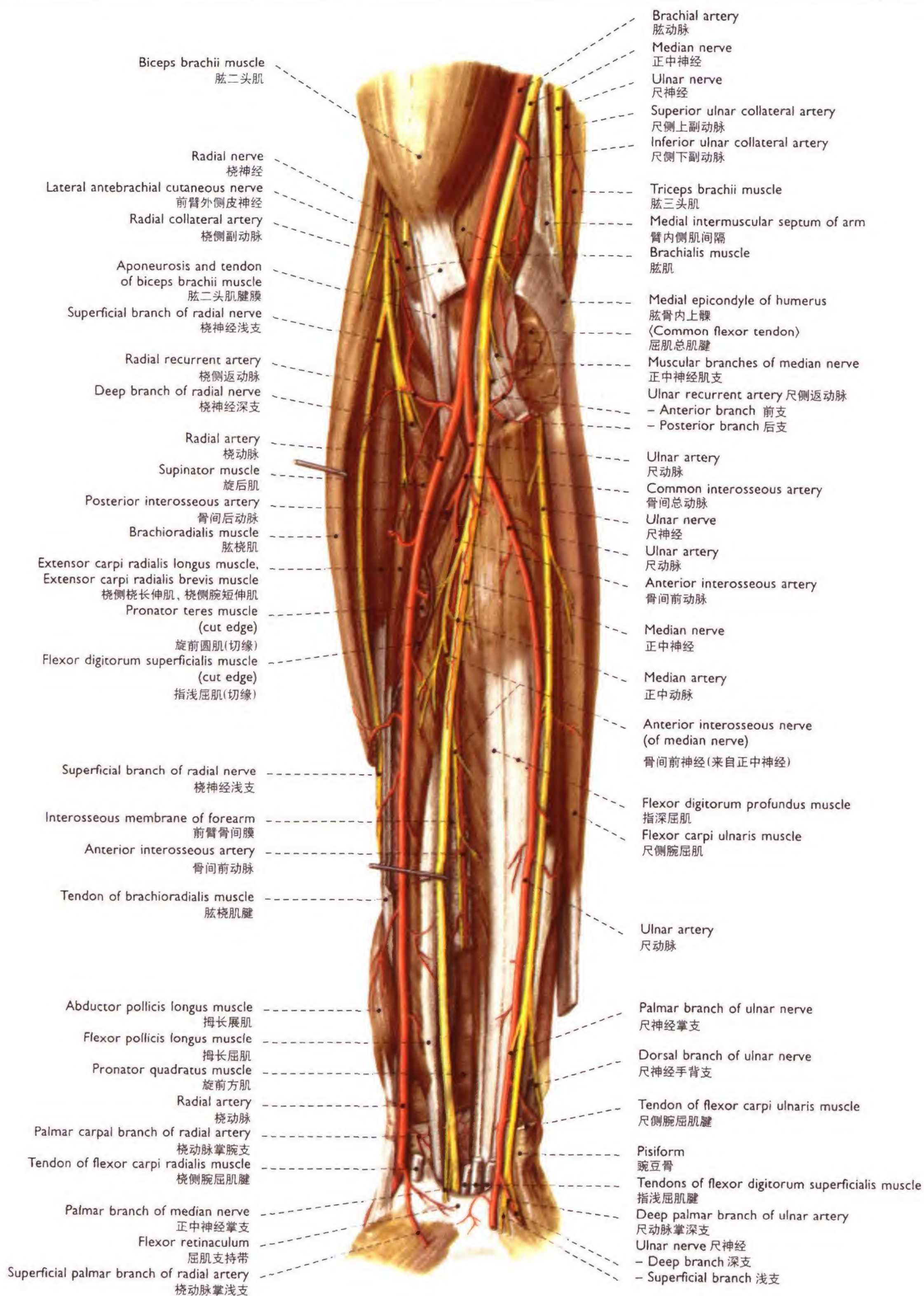
151 Subcutaneous veins and nerves of the anterior region of elbow and the anterior (flexor) region of the right forearm (50%) 右前臂前(屈)区和肘前区的浅静脉、皮神经

a Ventral aspect 前面观

b Coronal magnetic resonance image (MRI, T₁-weighted) 冠状位磁共振图像(MRI, T₁加权)



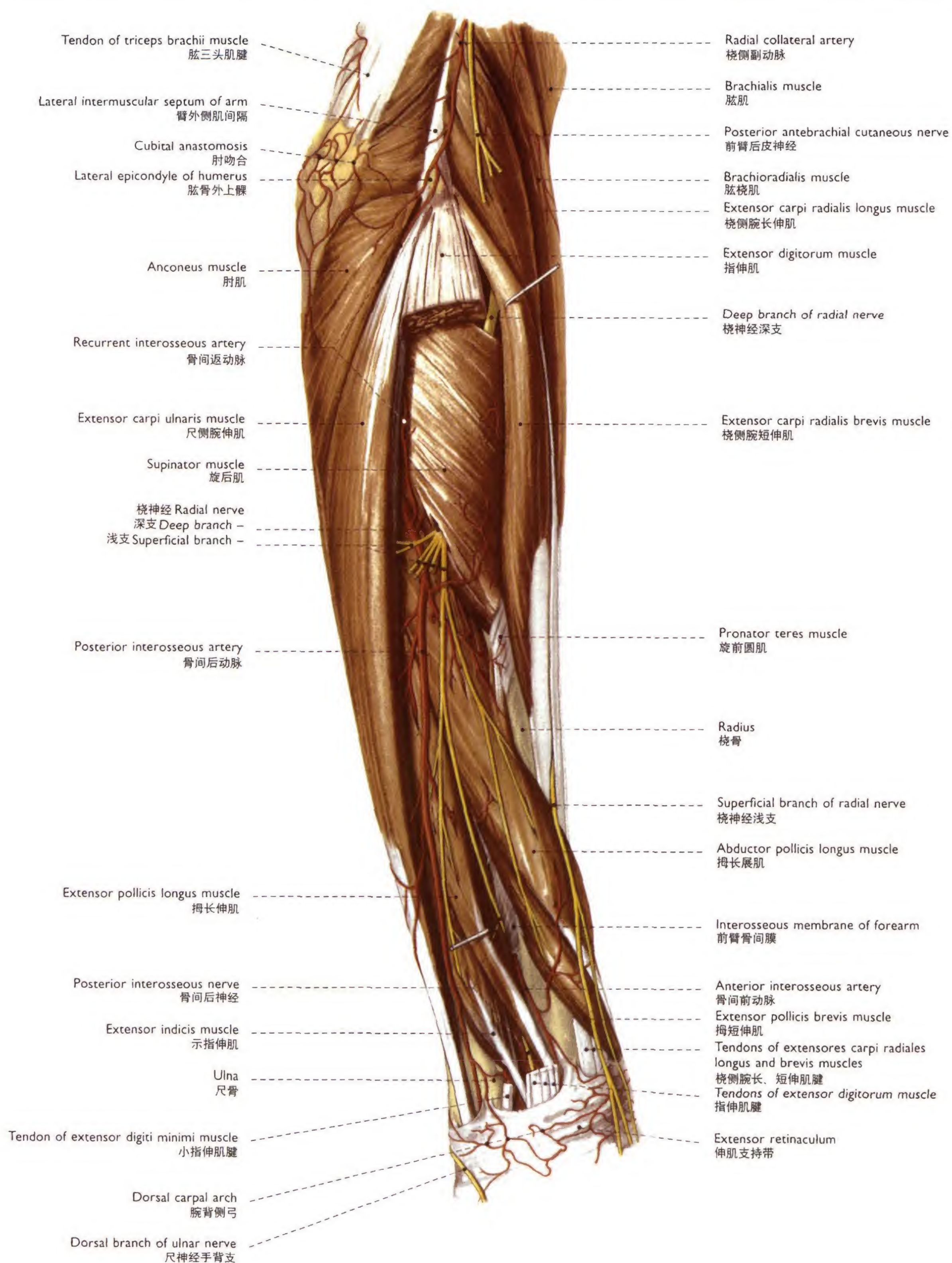
152 Arteries and nerves of the right forearm (50%) 右前臂动脉、神经
Ventral aspect 前面观



153 Arteries and nerves of the right forearm (50%) 右前臂动脉、神经

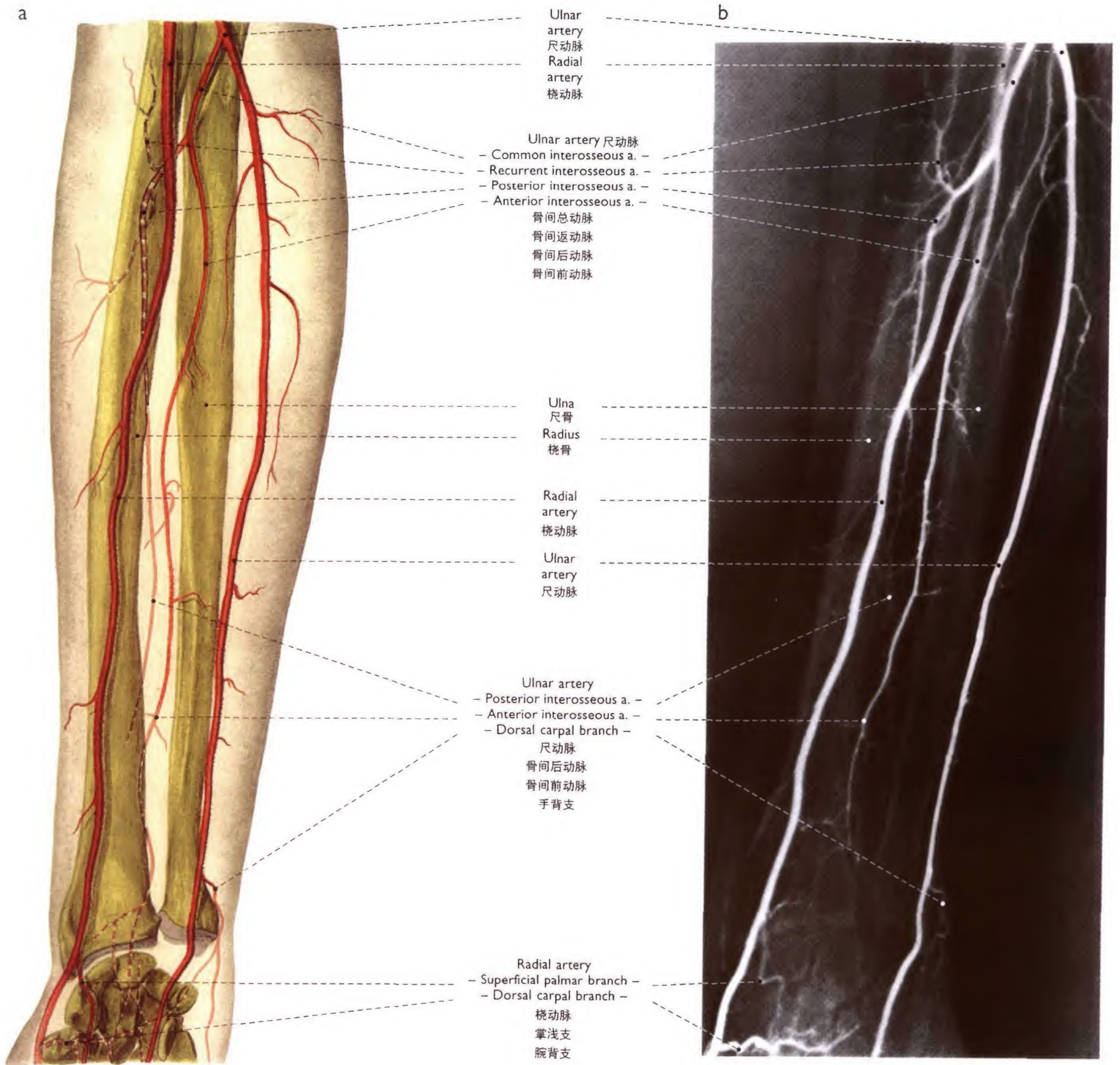
The superficial muscles were removed.

Ventral aspect 指浅屈肌已切除, 前面观



154 Arteries and nerves of the right forearm (50%) 右前臂动脉、神经

The superficial muscles were partially removed. 浅层肌肉部分已切除
 Dorsolateral aspect 后外侧观

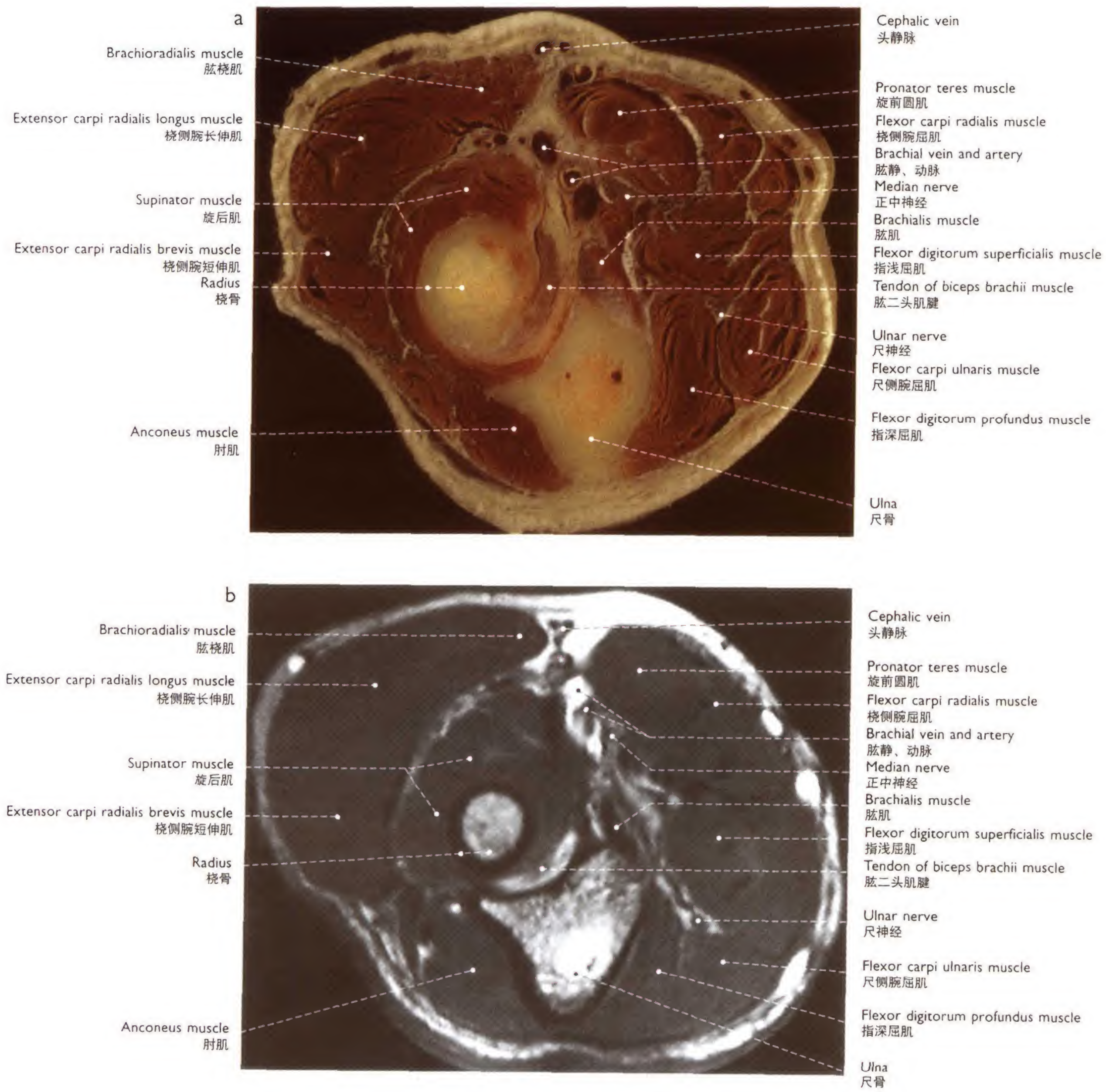


155 Arteries of the right forearm (60%) 右臂动脉

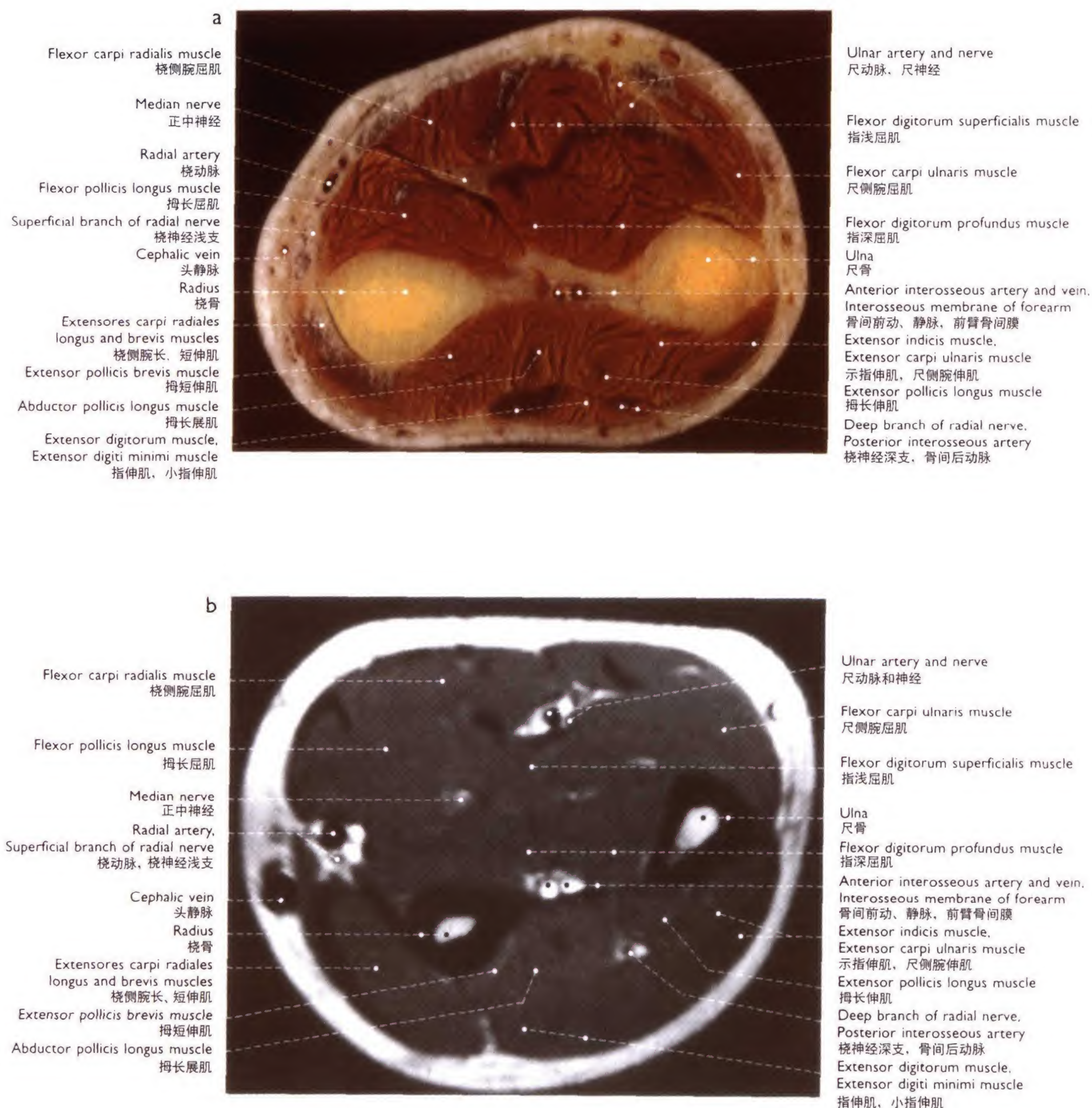
Ventral aspect 前面观

a Schematic representation 示意图

b Arteriogram 动脉造影照片



156 Right forearm (110%) 右前臂
Transverse sections through the proximal forearm
just below the elbow joint, distal aspect 经前臂上端即肘关节下方横断，下面观
a Anatomical section 解剖断面
b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)

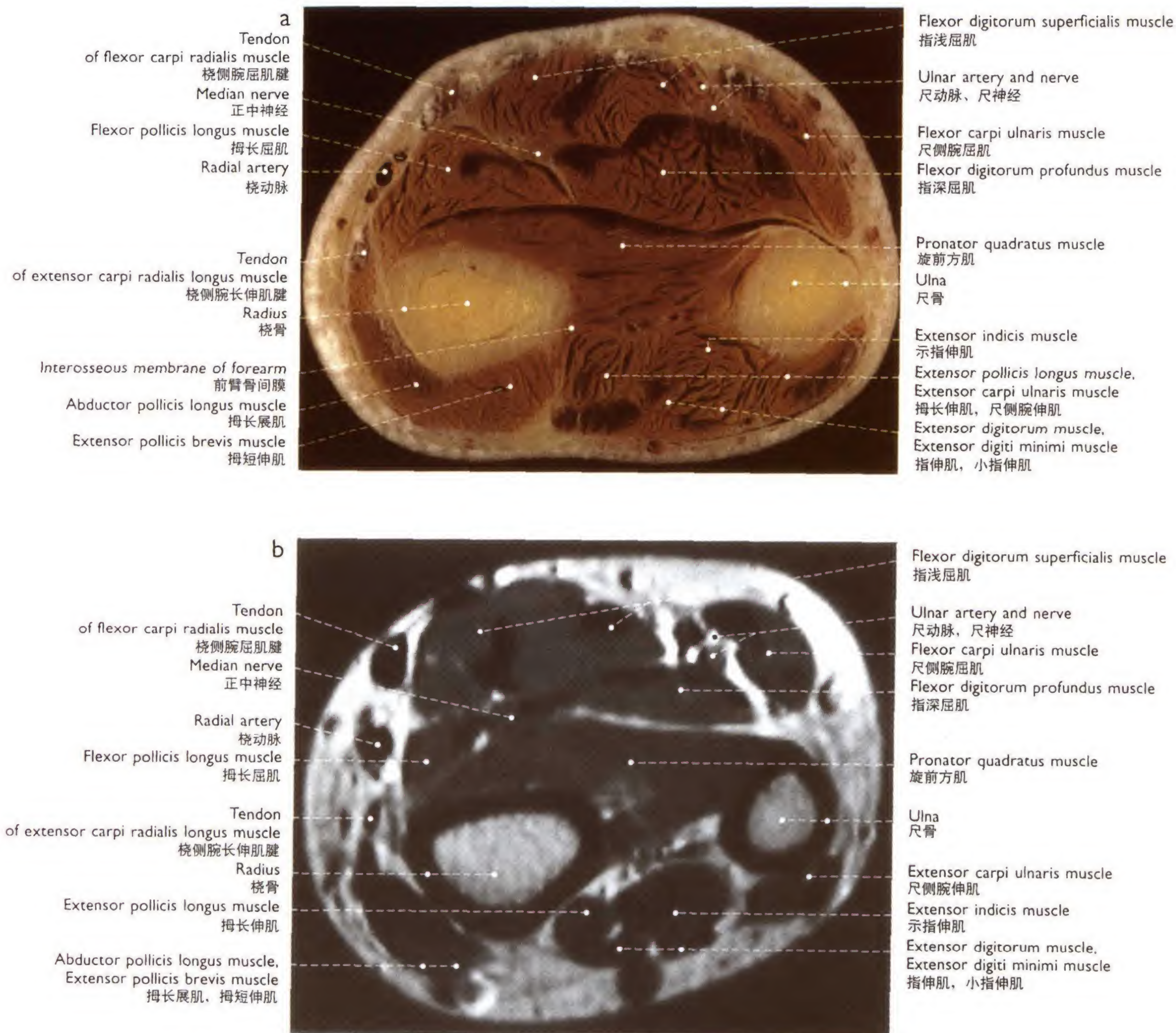


157 Right forearm (110%) 右前臂

Transverse sections through the proximal third of the forearm in supinated position, distal aspect 经前臂上三分之一处横断面, 旋后位, 下面观

a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)



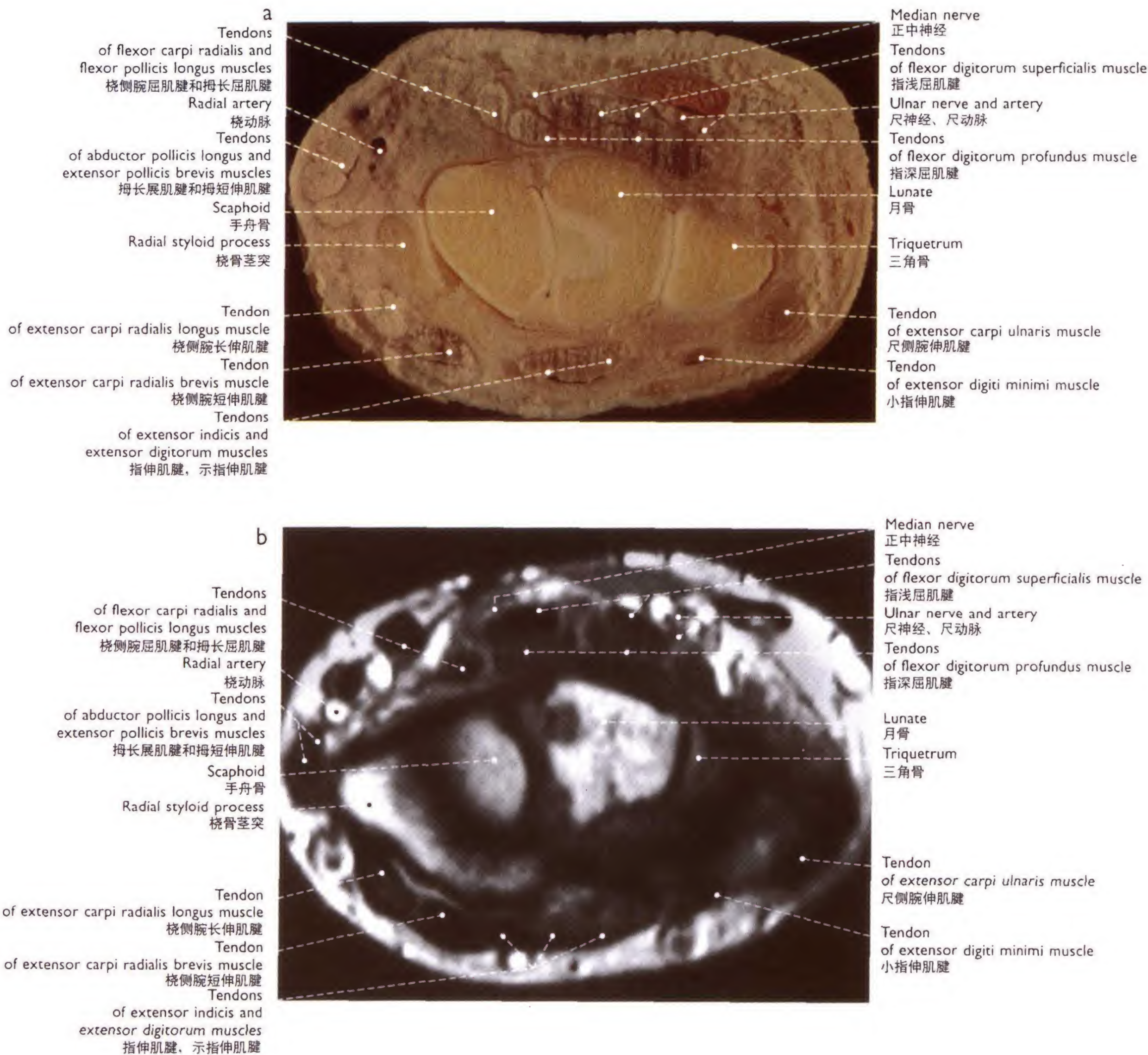
158 Right forearm (120%) 右前臂

Transverse sections through the distal third

of the forearm in supinated position, distal aspect 经前臂下三分之一处横断面, 旋后位, 下面观

a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)

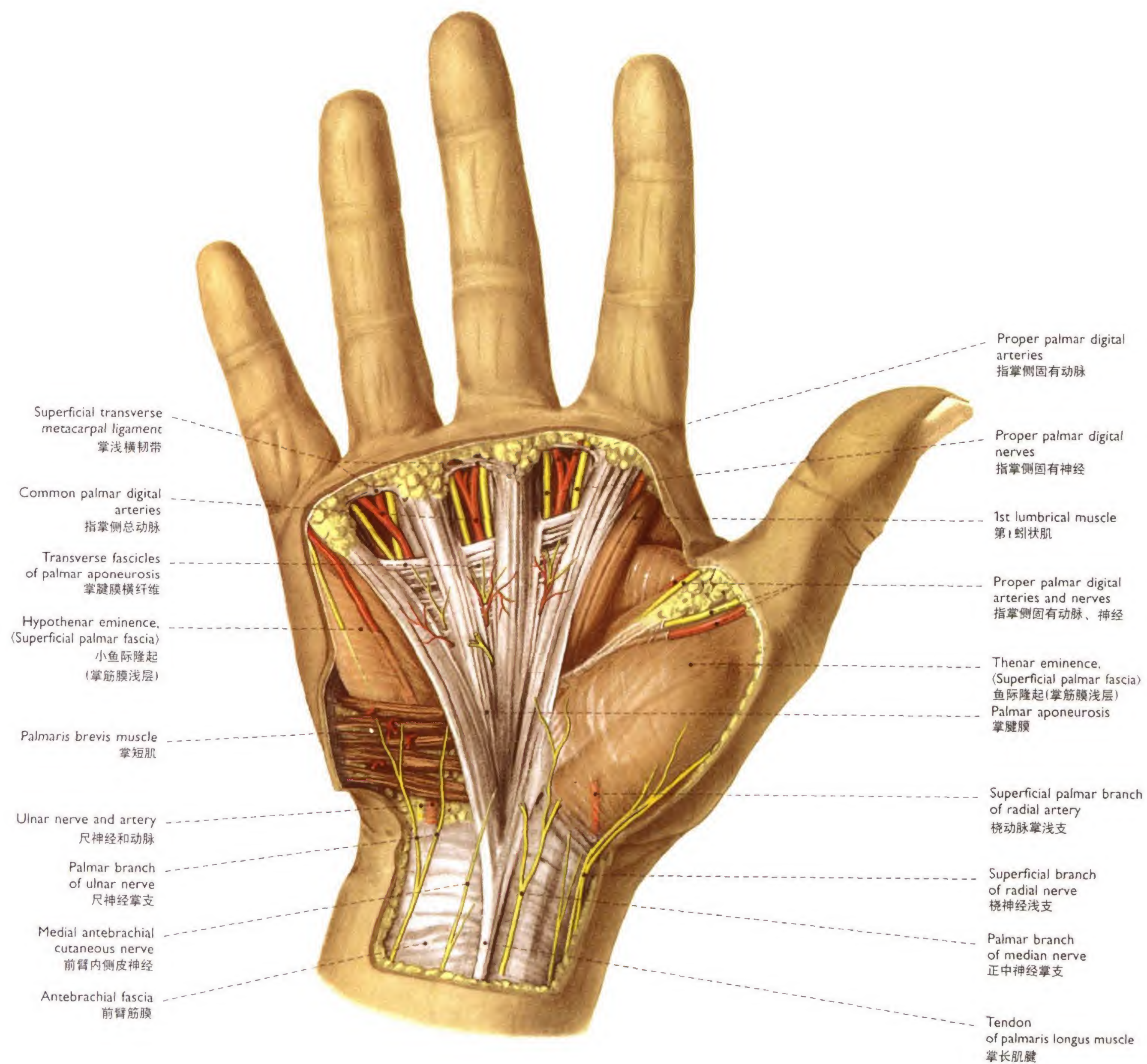


159 Right forearm (120%) 右前臂

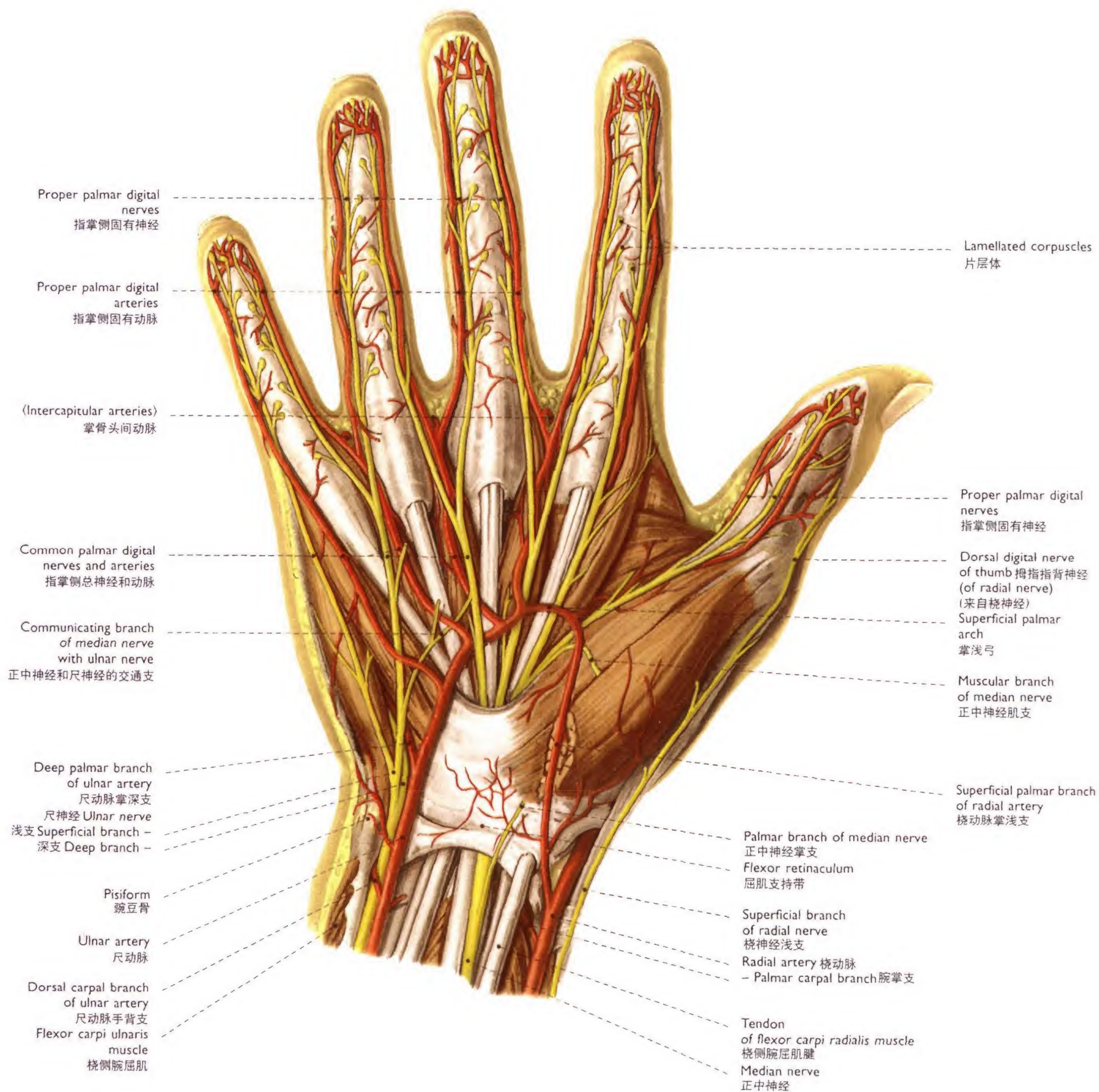
Transverse sections through the distal forearm at the level of the wrist joint. Forearm and hand in supinated position, distal aspect 经前臂下端腕关节水平横断, 旋后位, 下面观

a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)



160 Arteries and nerves
of the palm of the right hand (75%) 右手掌侧动脉、神经
Palmar aspect 前面观

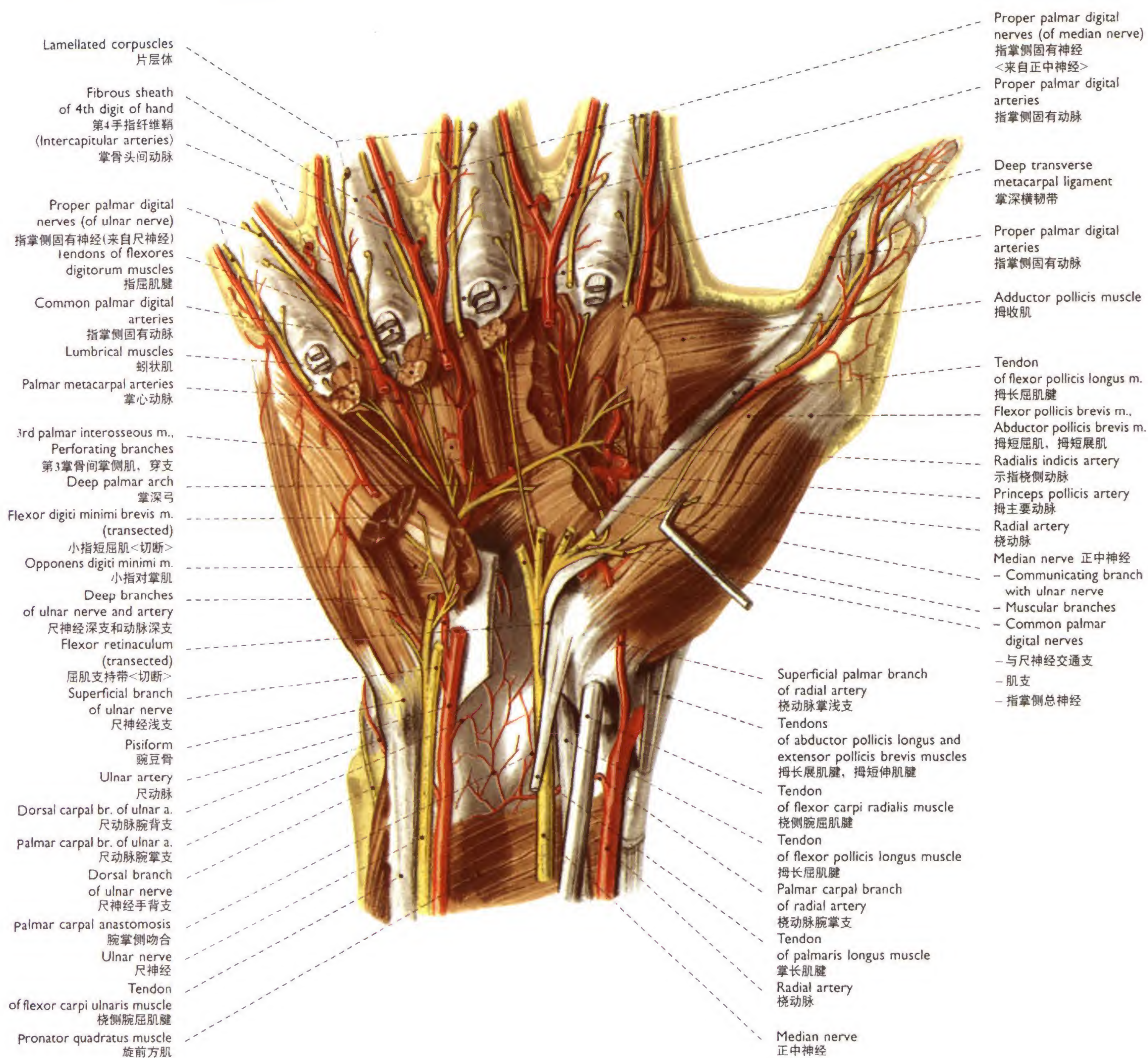


161 Arteries and nerves

of the palm of the right hand (75%) 右手掌动脉、神经

The palmar aponeurosis was removed.

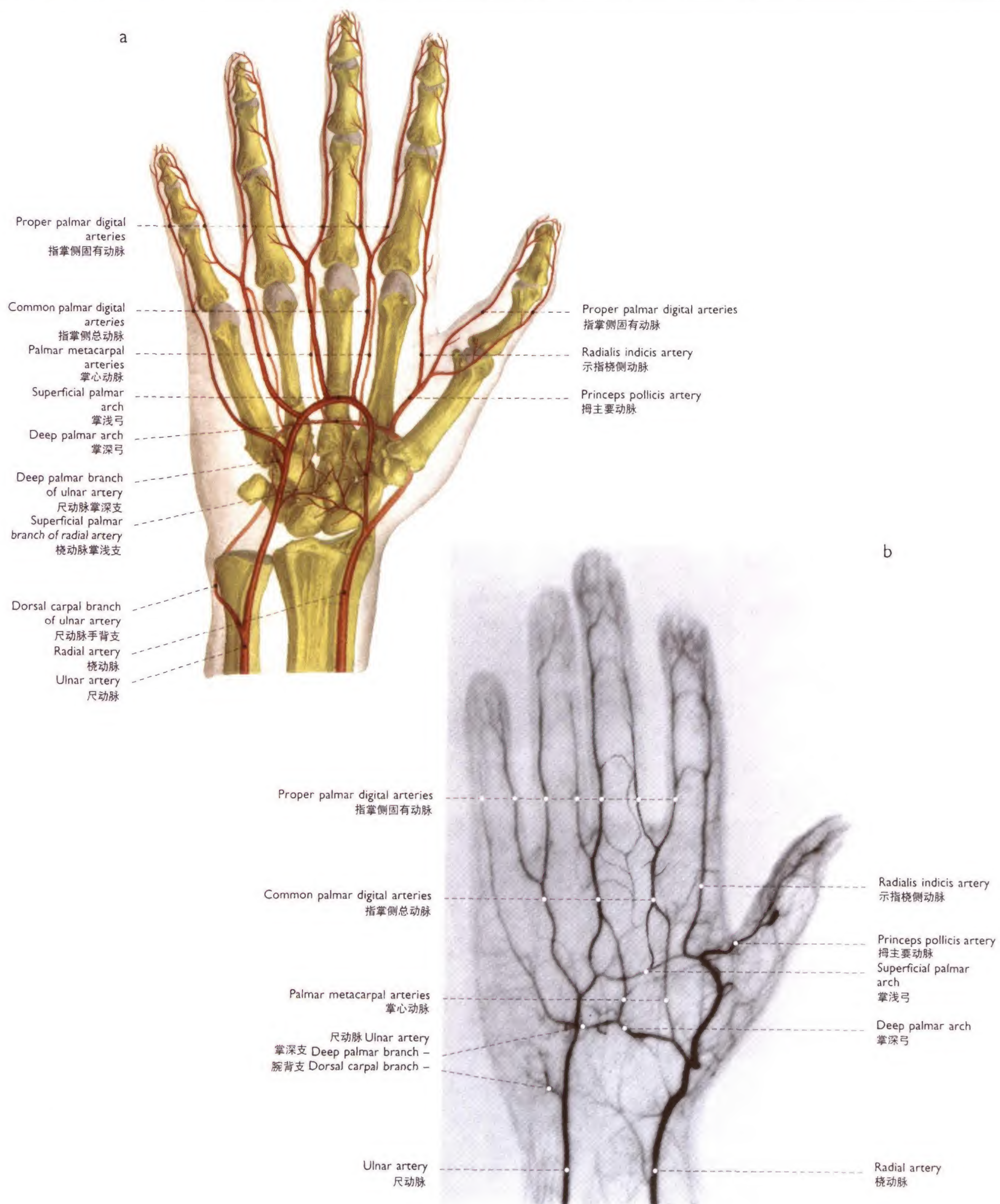
Palmar aspect 掌腱膜被切除, 前面观



162 Arteries and nerves

of the palm of the right hand (75%) 右手掌动脉, 神经

The palmar aponeurosis and the flexor muscles of the fingers were removed. Palmar aspect 掌腱膜和指屈肌被切除, 前面观

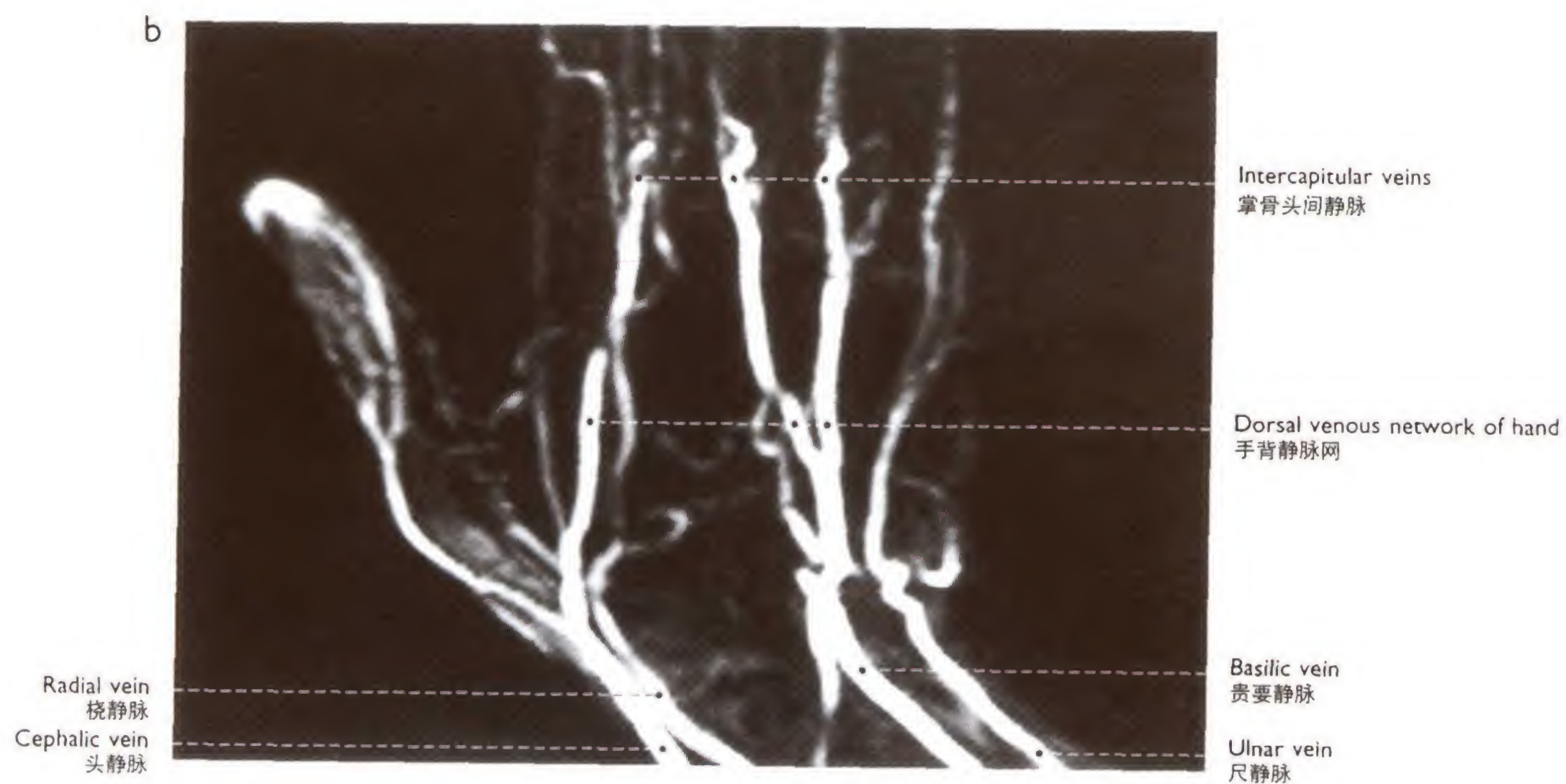
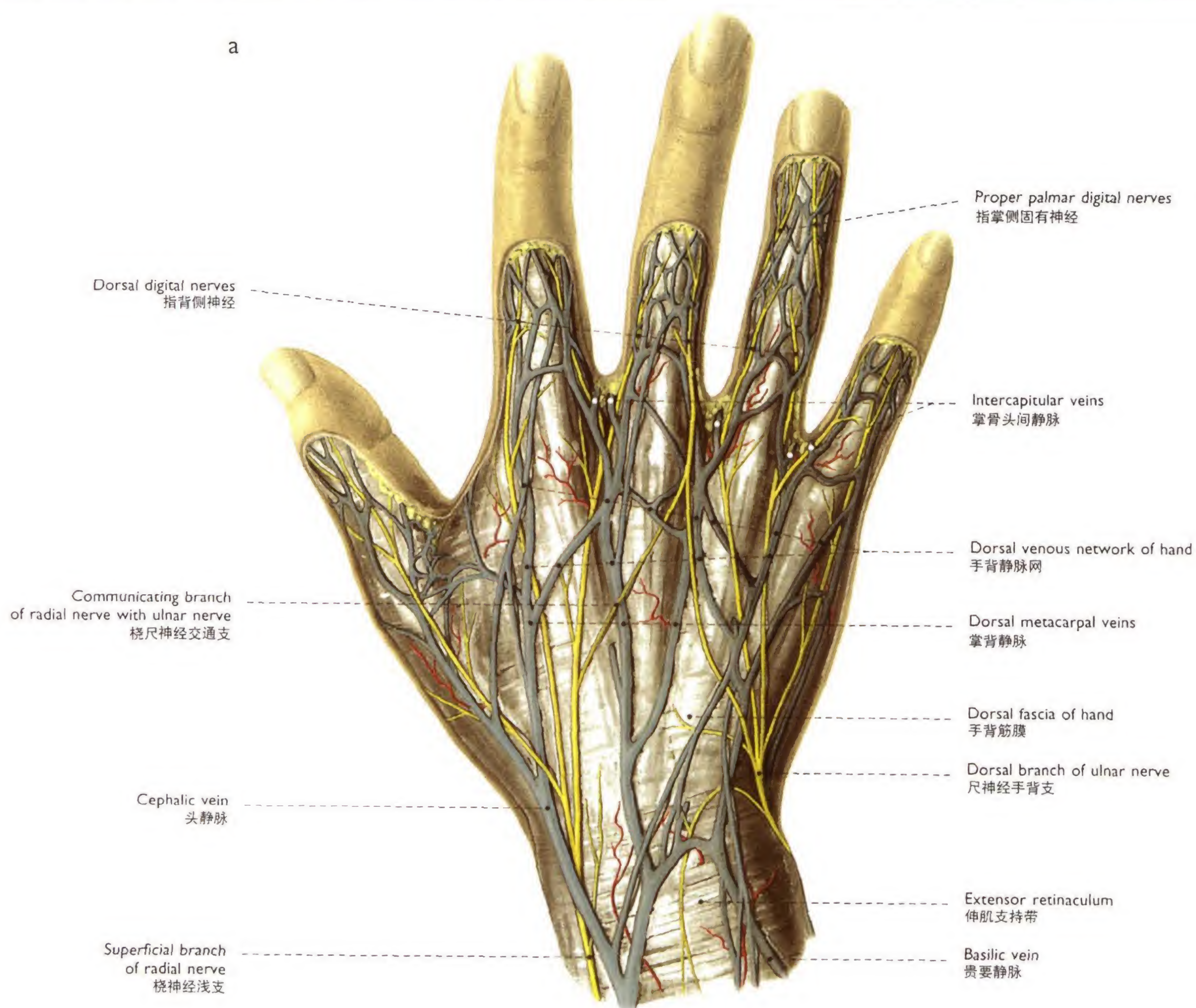


163 Arteries of the right hand (50%) 右手动脉

Palmar aspect 前面观

a Schematic representation 示意图

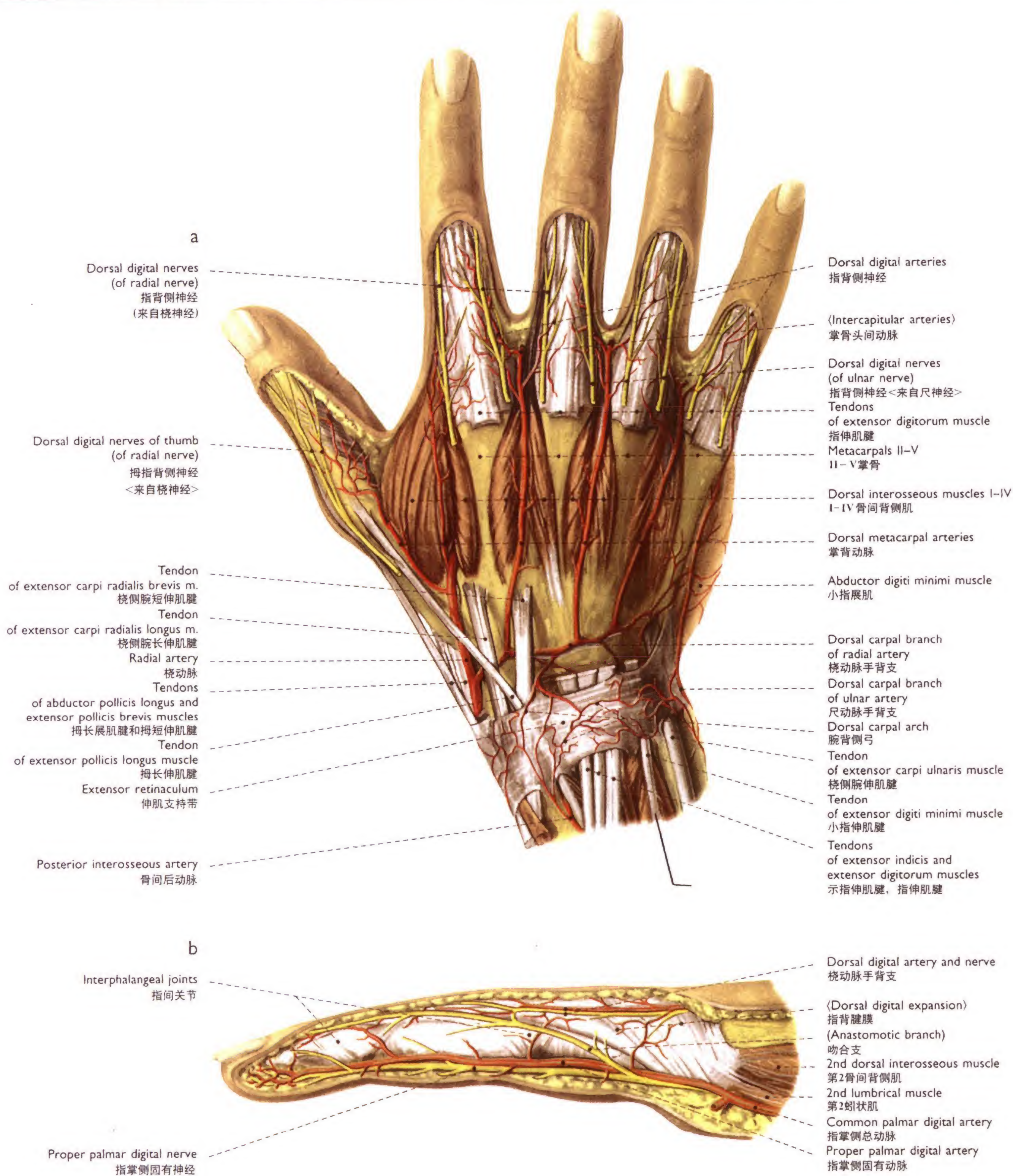
b Arteriogram 动脉造影照片



164 Subcutaneous veins and nerves
of the dorsum of the right hand (60%) 右手背浅静脉和神经

a Dorsal aspect 后面观

b Magnetic resonance angiogram (MRA) 磁共振血管造影术(MRA)



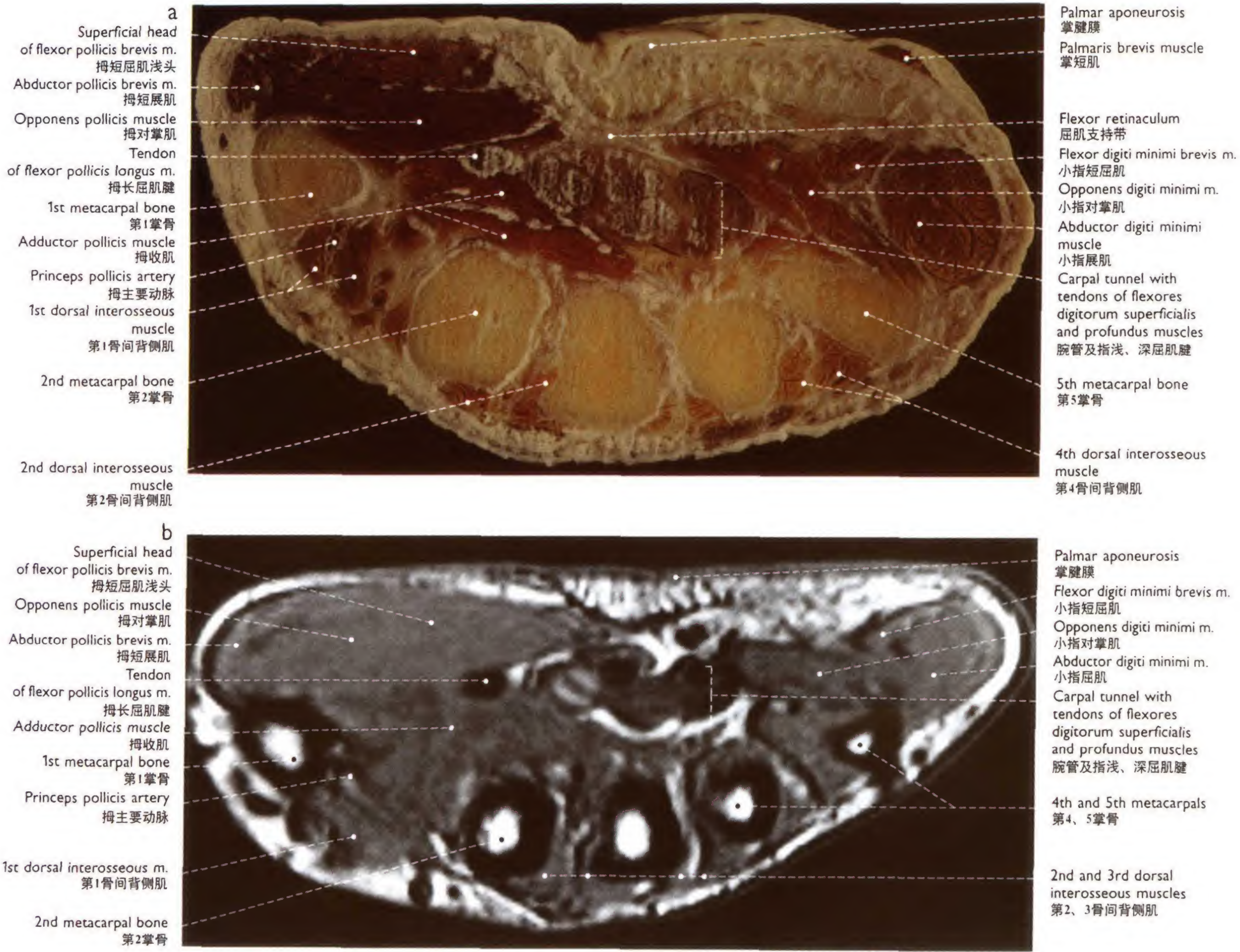
165 Arteries and nerves of the dorsum

of the right hand and the fingers 右手和指背部动脉与神经

a The extensor tendons to the fingers were removed.

Dorsal aspect of the dorsum of hand (60%) 指伸肌腱已切除, 手背面观

b Middle finger (90%), radial aspect 中指, 桡侧面观

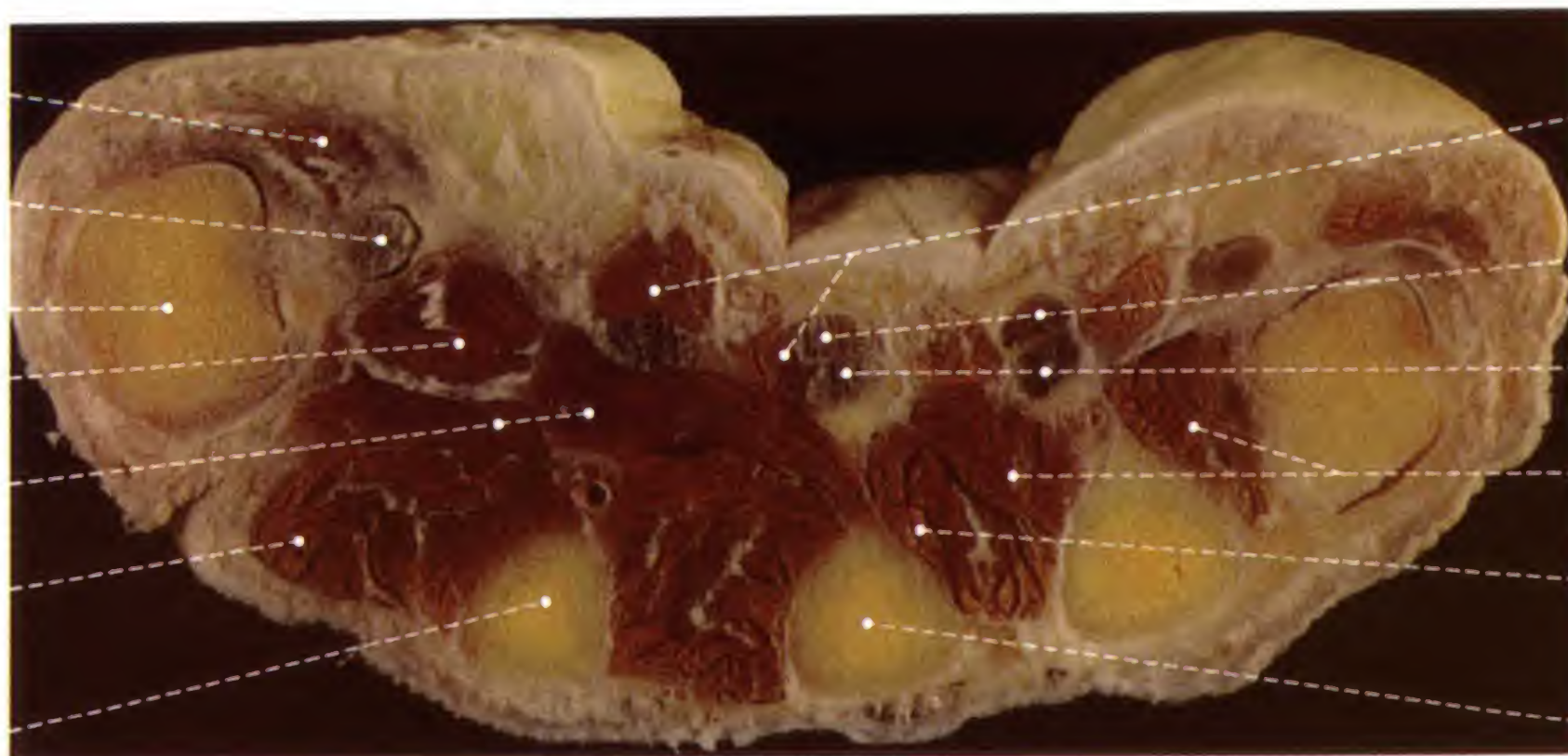


166 Right hand (150%) 右手

Transverse sections through the proximal metacarpus, hand in full supination, distal aspect 经掌骨上端横断，手充分旋后，下面观

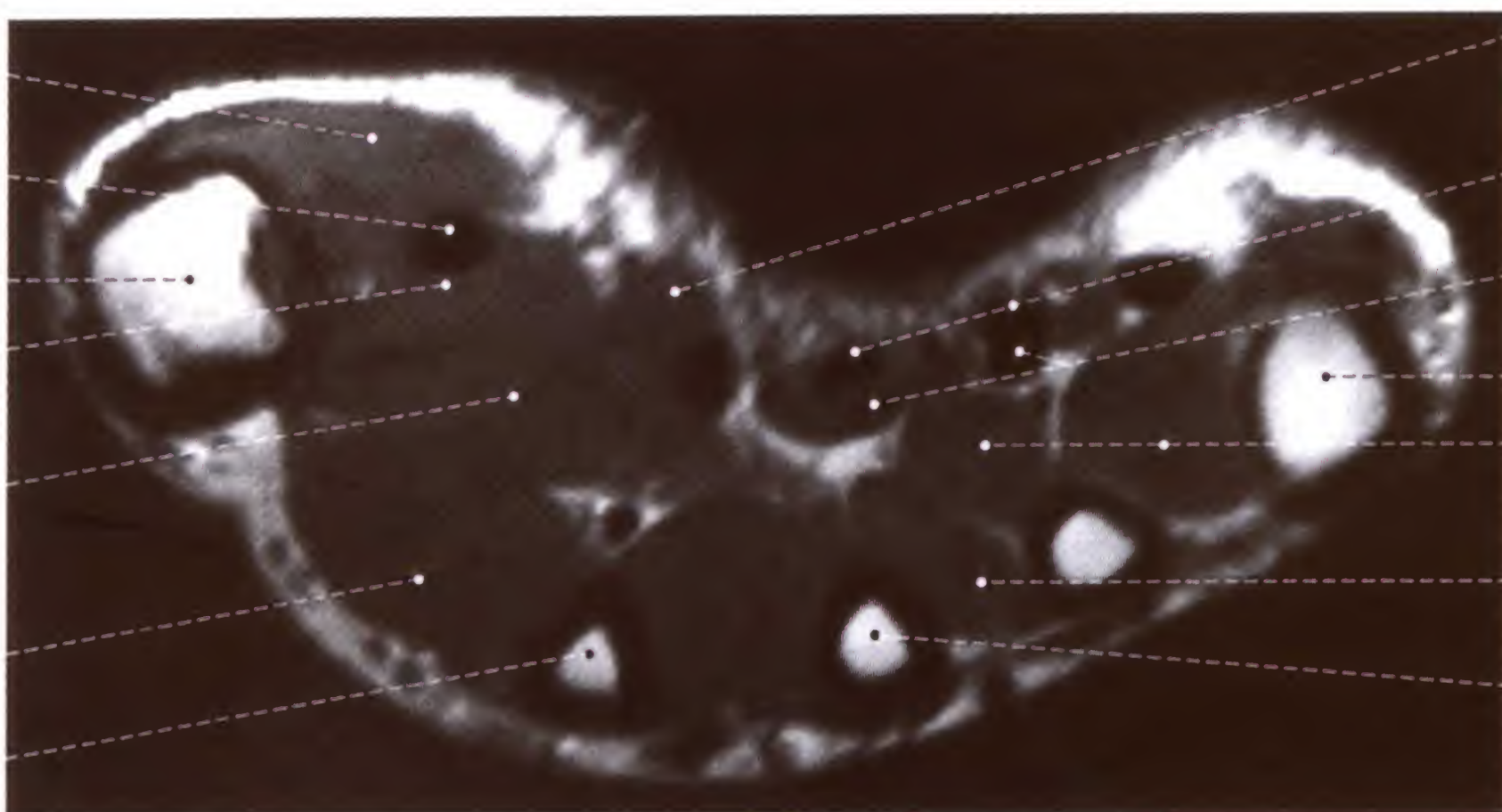
- a Anatomical section 解剖断面
- b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)

a
Superficial head
of flexor pollicis brevis muscle
拇短屈肌浅头
Tendon
of flexor pollicis longus muscle
拇长屈肌腱
1st metacarpal bone
第1掌骨
Deep head
of flexor pollicis brevis muscle
拇短屈肌深头
Adductor pollicis muscle
拇收肌
1st dorsal interosseous muscle
第1骨间背侧肌
2nd metacarpal bone
第2掌骨

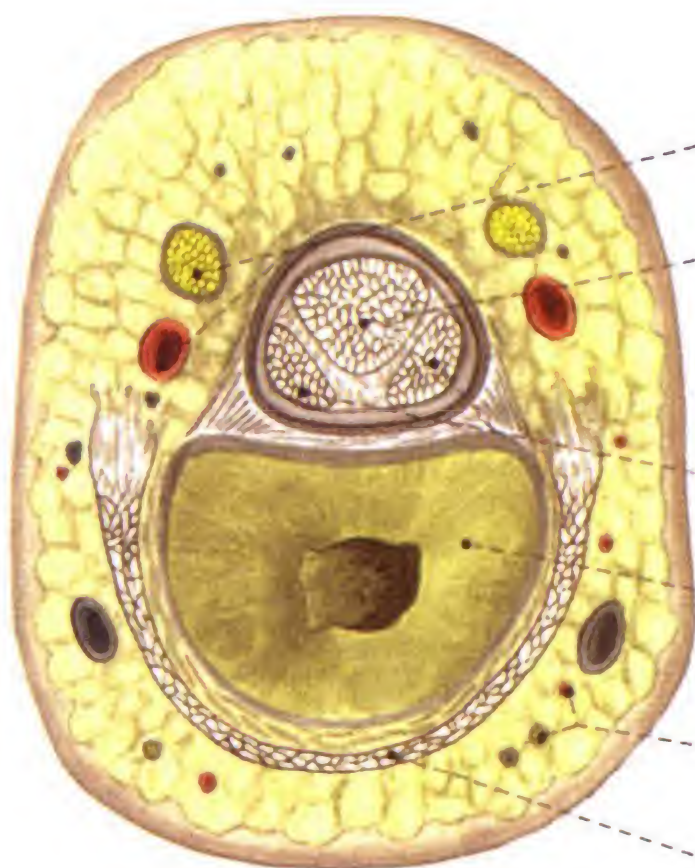


1st and 2nd lumbrical muscles
第1、2蚓状肌
Tendons (II and III)
of flexor digitorum superficialis m.
II和III指浅屈肌腱
Tendons (II and III)
of flexor digitorum profundus m.
II和III指深屈肌腱
2nd and 3rd palmar interosseous
muscles
第2、3骨间掌侧肌
3rd dorsal interosseous muscle
第3骨间背侧肌
3rd metacarpal bone
第3掌骨

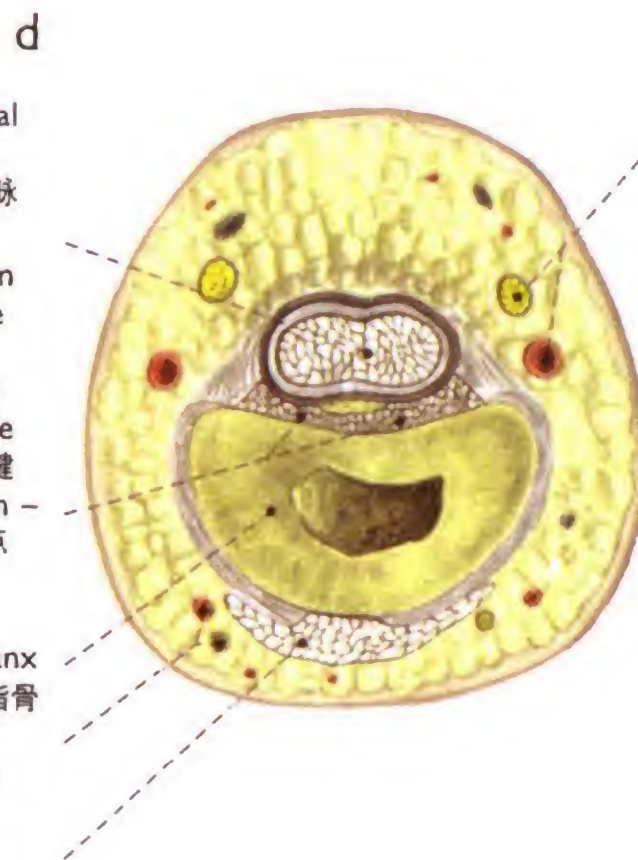
b
Superficial head
of flexor pollicis brevis muscle
拇短屈肌浅头
Tendon
of flexor pollicis longus muscle
拇长屈肌腱
1st metacarpal bone
第1掌骨
Deep head
of flexor pollicis brevis muscle
拇短屈肌深头
Adductor pollicis muscle
拇收肌
1st dorsal interosseous muscle
第1骨间背侧肌
2nd metacarpal bone
第2掌骨



1st lumbrical muscle
第1蚓状肌
Tendons (II and III)
of flexor digitorum superficialis m.
II和III指浅屈肌腱
Tendons (II and III)
of flexor digitorum profundus m.
II和III指深屈肌腱
5th metacarpal bone
第5掌骨
2nd and 3rd palmar interosseous
muscles
第2、3骨间掌侧肌
3rd dorsal interosseous muscle
第3骨间背侧肌
3rd metacarpal bone
第3掌骨



c
Proper palmar digital
nerve and artery
指掌侧固有神经和动脉
Tendon
of flexor digitorum
profundus muscle
指深屈肌腱
Flexor digitorum
superficialis muscle
- Tendon 指浅屈肌腱
Insertion of tendon
肌腱止点
Proximal phalanx
近节指骨
Middle phalanx
中节指骨
Dorsal digital
artery and nerve
指背动脉和神经
(Dorsal digital
expansion)
指背腱膜

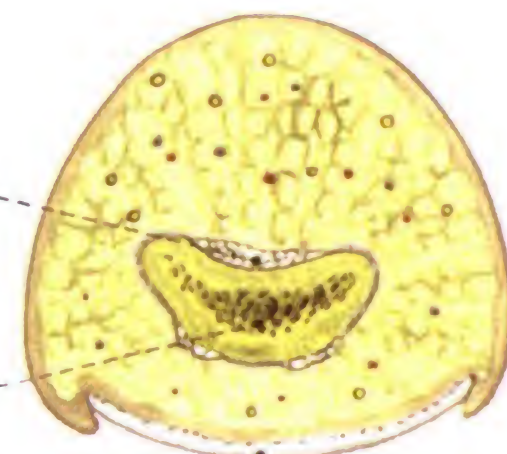


d
Proper palmar digital
nerve and artery
指掌侧固有神经、动脉

Insertion of tendon
of flexor digitorum
profundus muscle
指深屈肌腱止点

Distal phalanx
远节指骨

Nail
甲



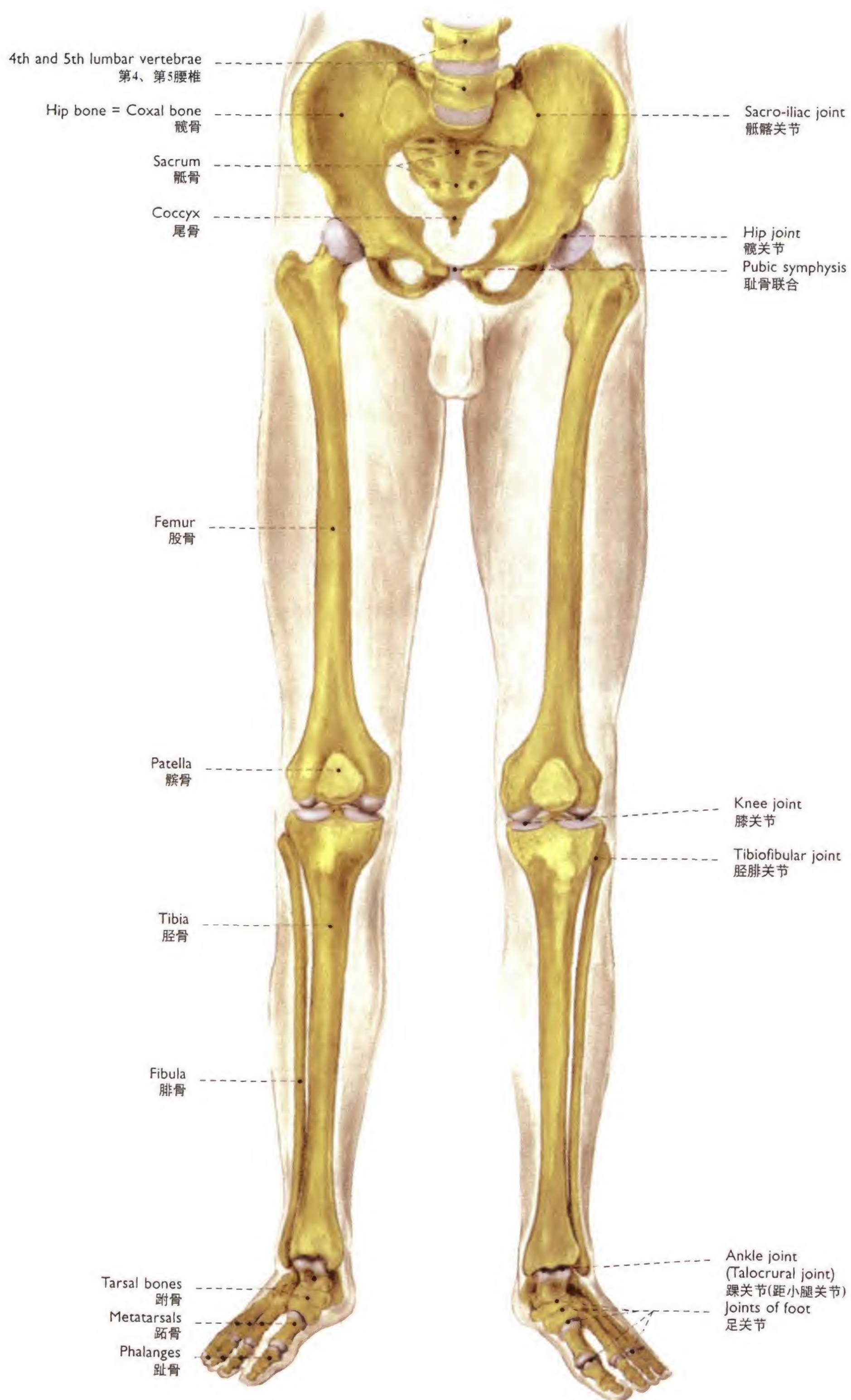
167 Right hand 右手

Hand in full supination 手充分旋后

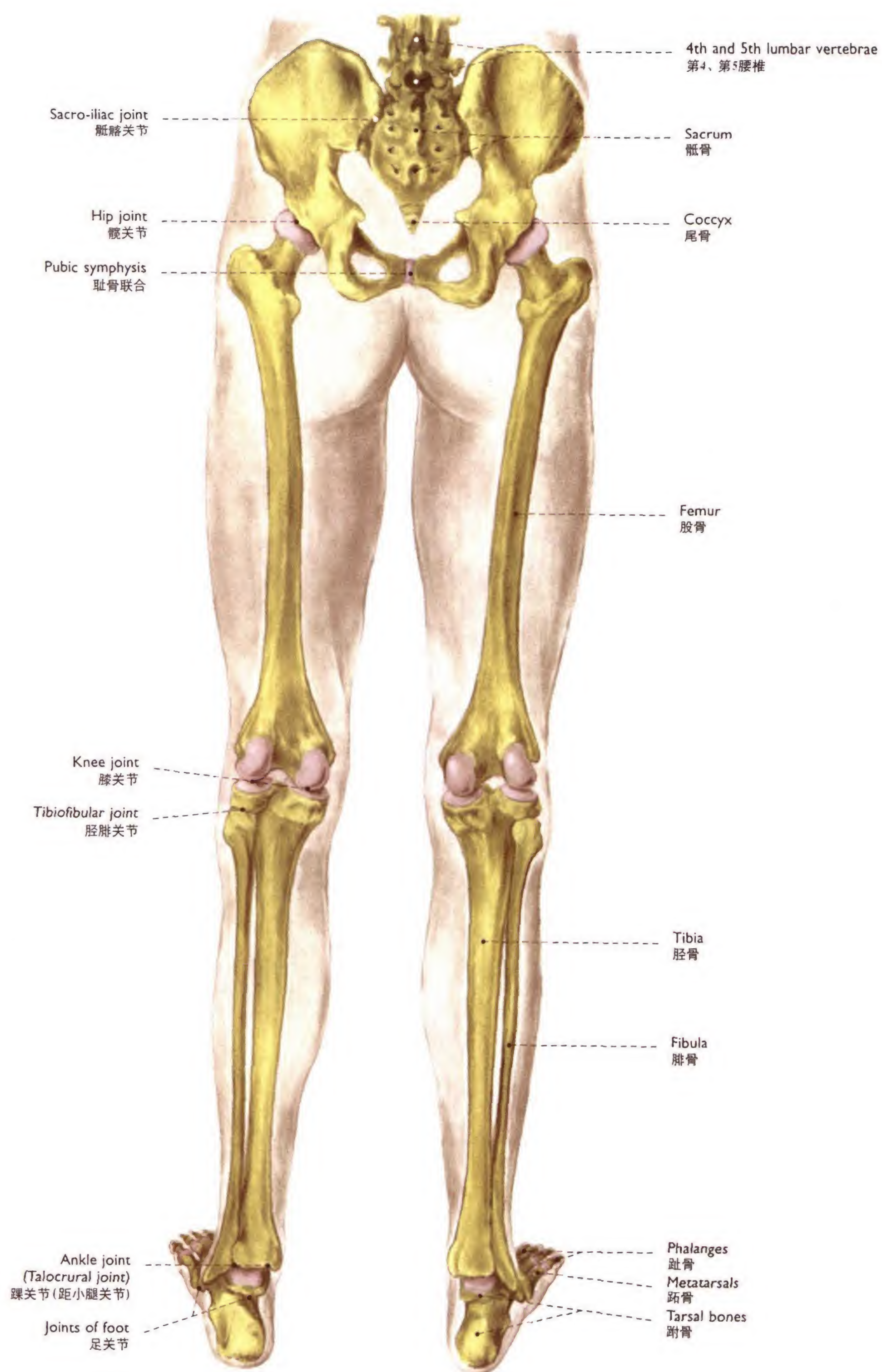
- a, b Transverse sections through the middle part
of the metacarpus (130%), distal aspect 经掌骨中部横断，下面观
a Anatomical section 解剖断面
b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)
c-e Transverse sections through 横断位置为
c the proximal phalanx 近节指骨
d the middle phalanx 中节指骨
e the distal phalanx
of the middle finger (230%), distal aspect 中指远节指骨，下面观

Lower Limb

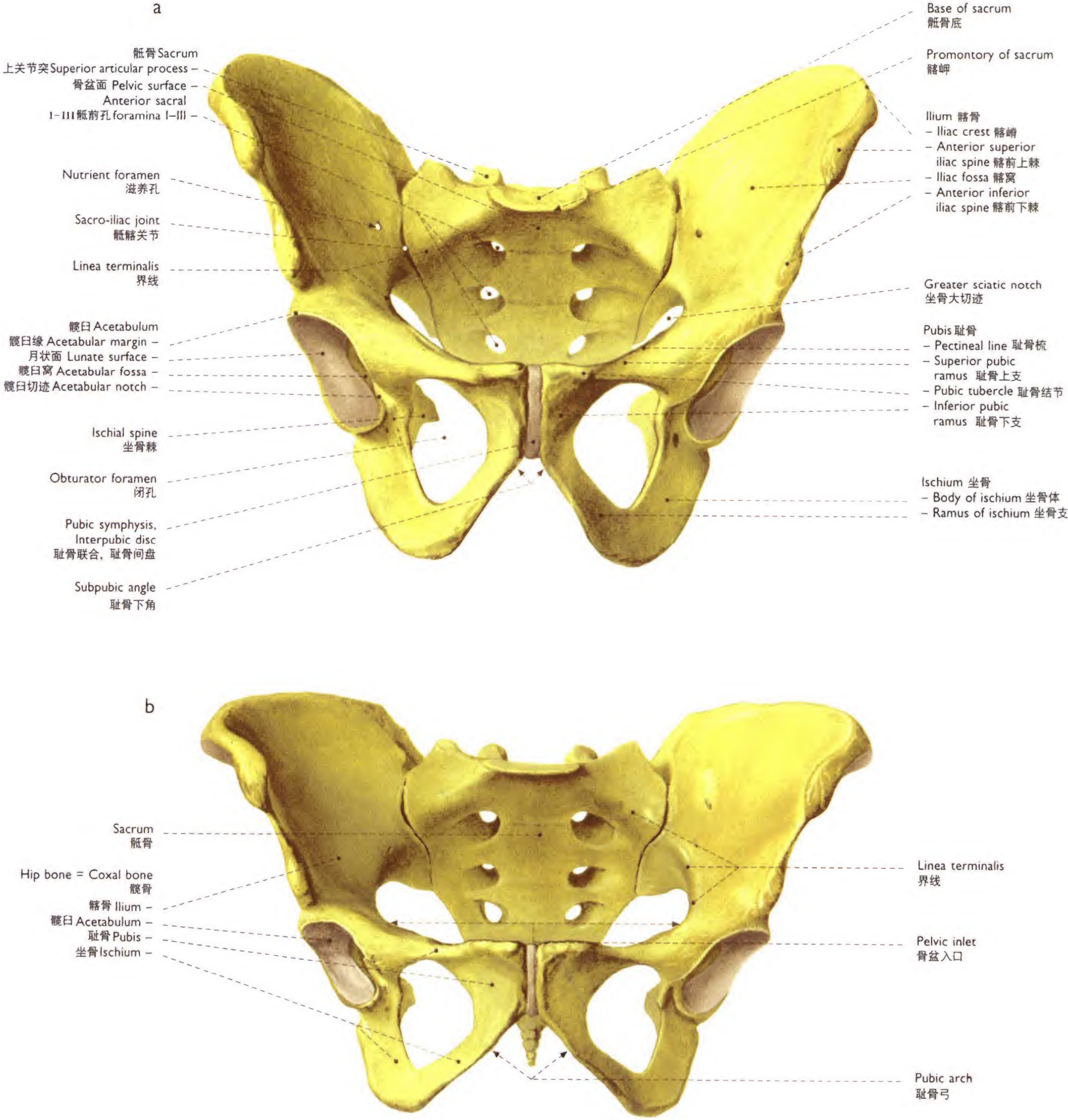
下 肢



170 Lower limb (20%) 下肢
Ventral aspect 前面观

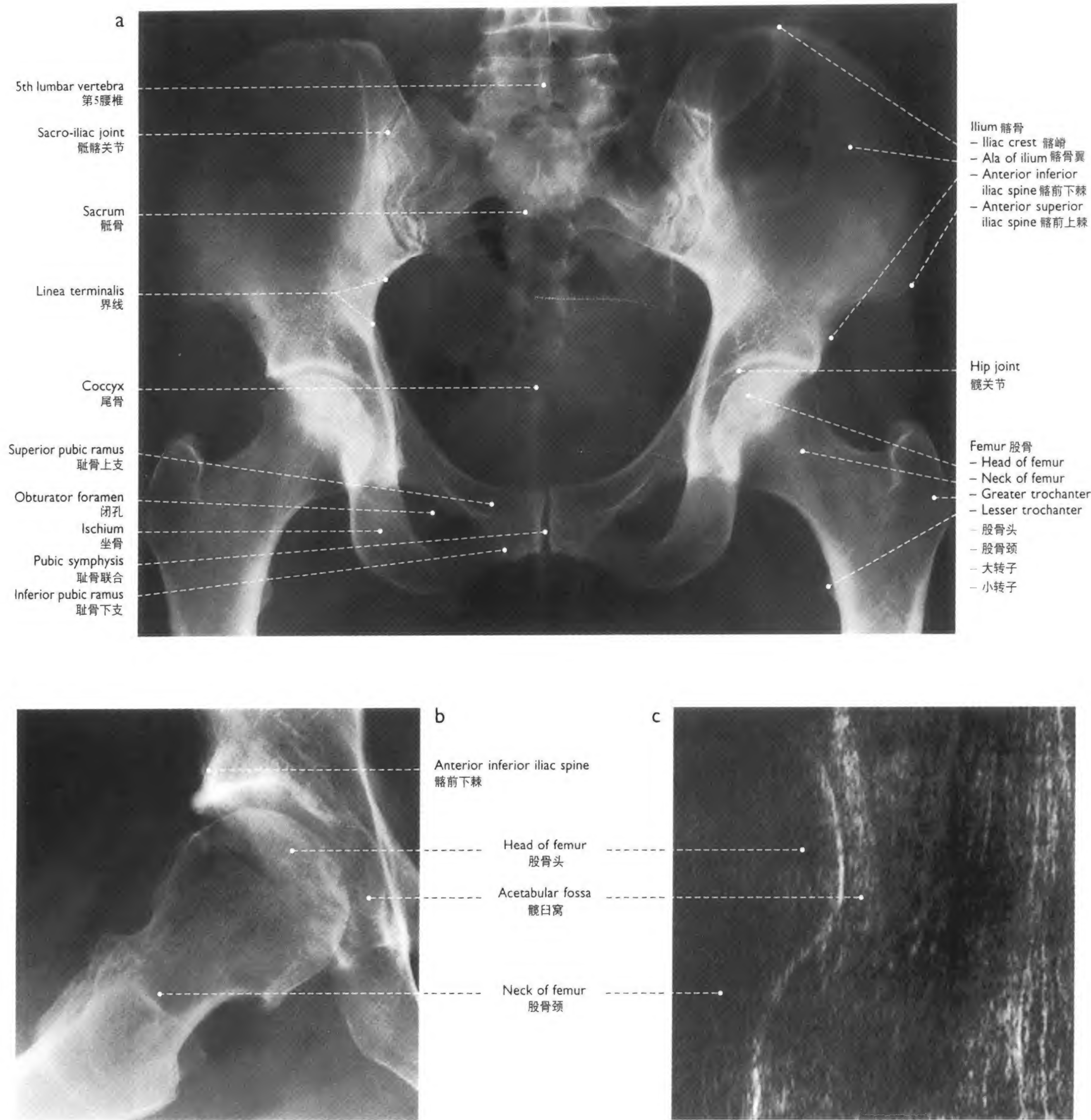


171 Lower limb (20%) 下肢
Dorsal aspect 后面观



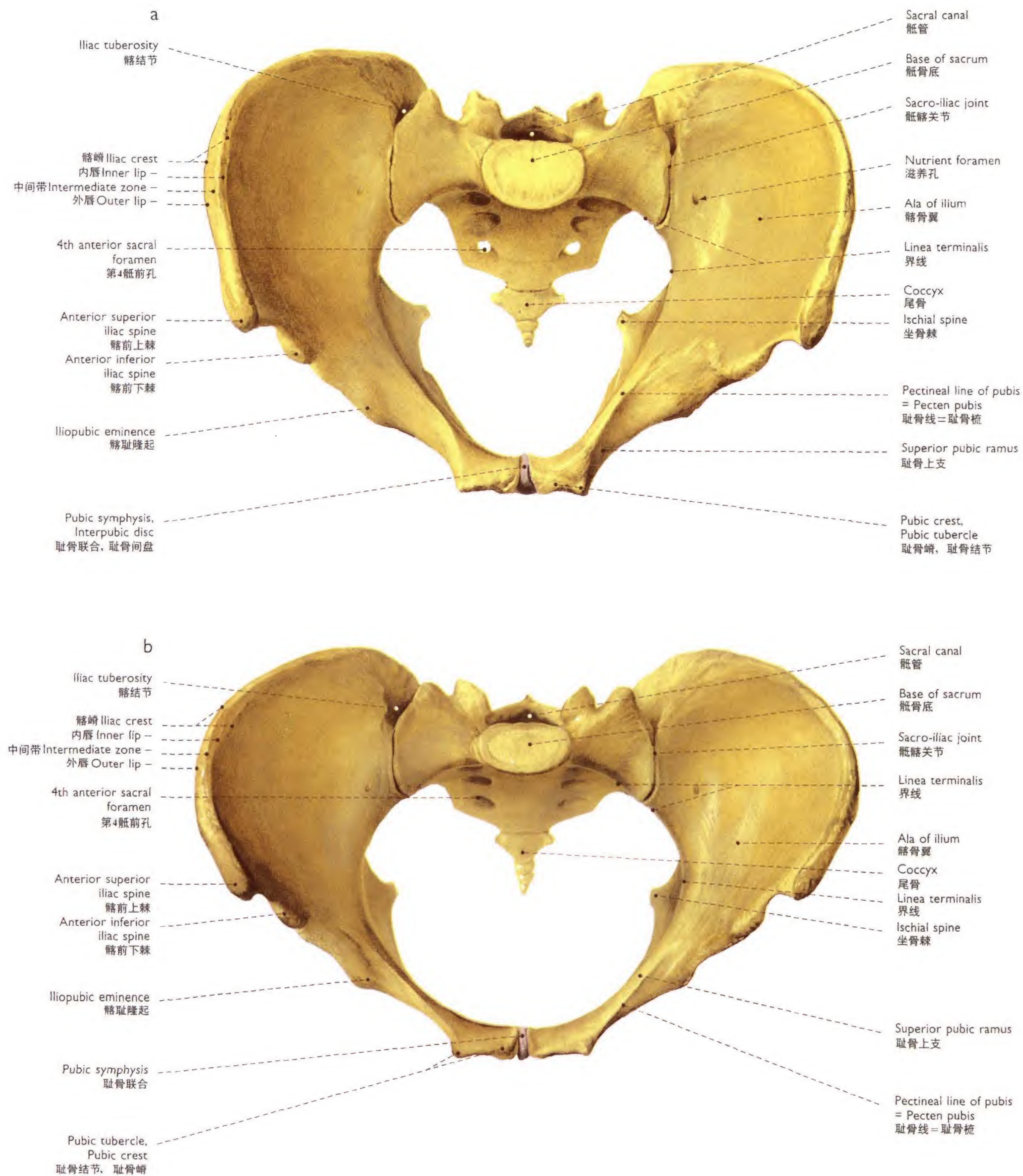
172 Pelvic girdle (40%) 骨盆

Ventral aspect 前面观
a Male pelvis 男性骨盆
b Female pelvis 女性骨盆



173 Pelvic girdle and proximal thigh bones (= femora) 骨盆和股骨上端

- a Anteroposterior radiograph (50%) 前后位X线片
- b Anteroposterior radiograph of the right hip joint, the femur in abduction (65%) 右髋关节前后位X线片，股骨内收
- c Ultrasonic image of the right hip joint 右髋关节超声图像

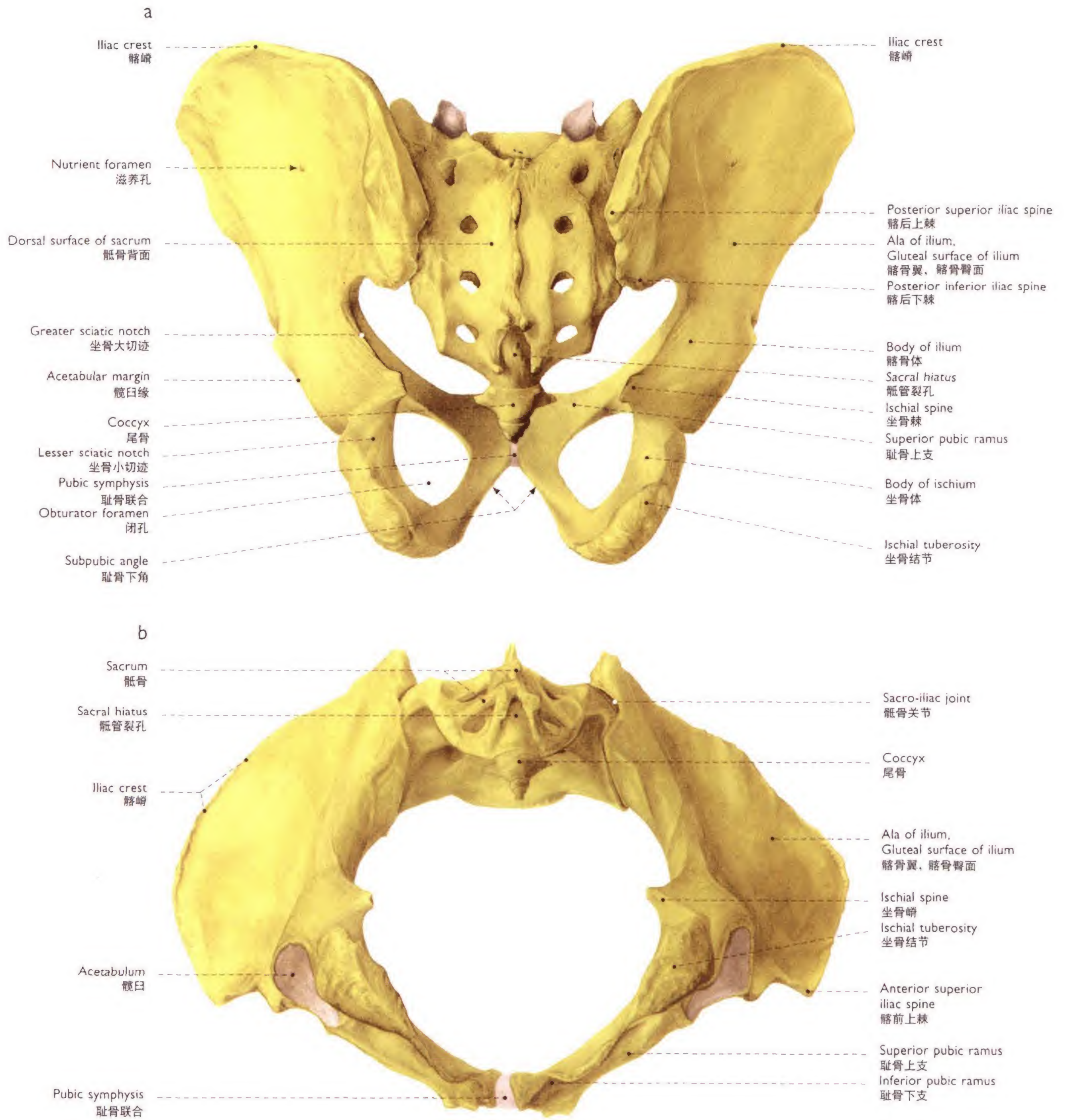


174 Pelvic girdle (40%) 骨盆

Superior aspect 上面观

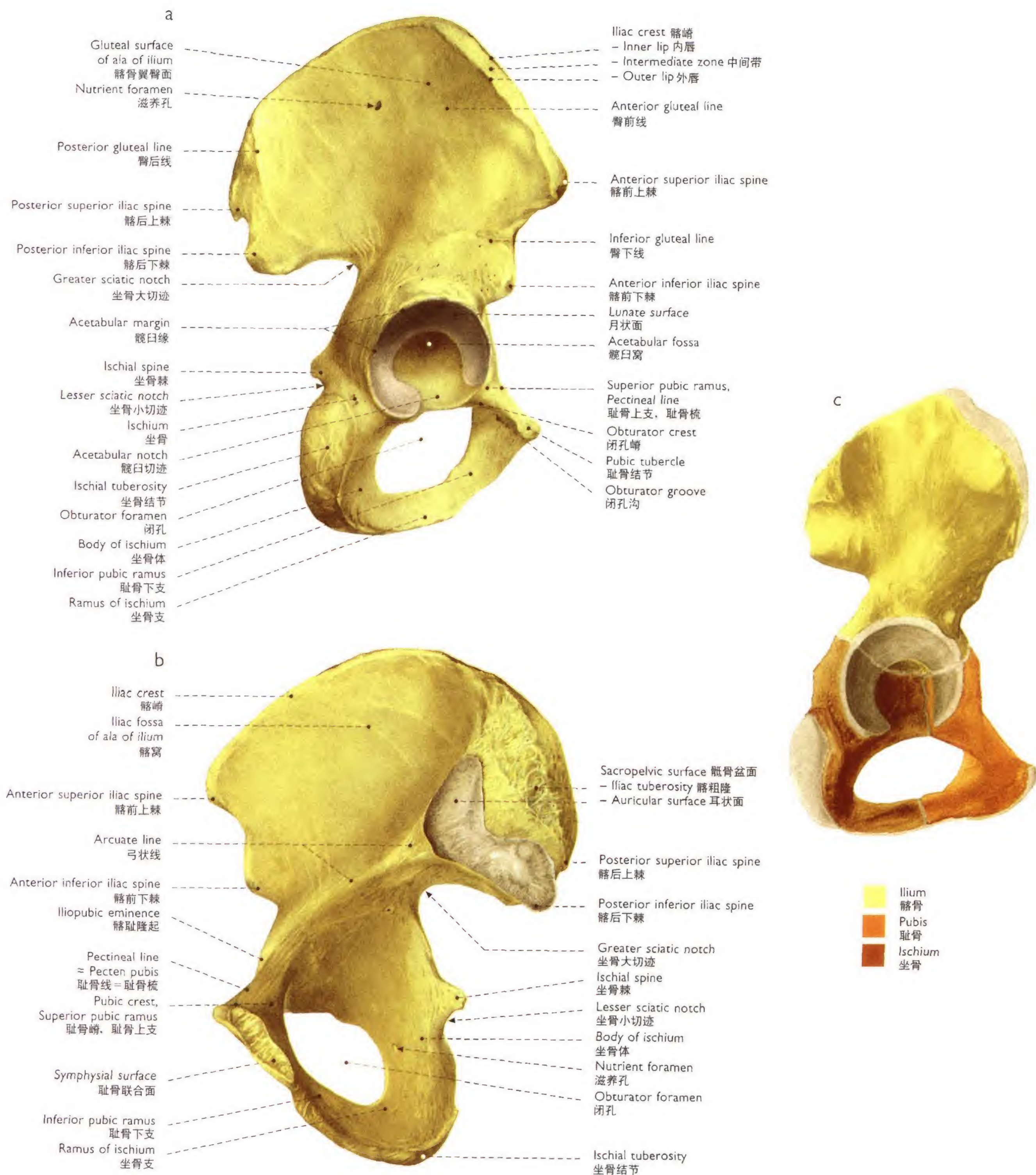
a Male pelvis 男性骨盆

b Female pelvis 女性骨盆



175 Pelvic girdle of a female (40%) 女性骨盆

a Dorsal aspect 后面观
b Inferior aspect 下面观



176 Right hip bone 右髌骨

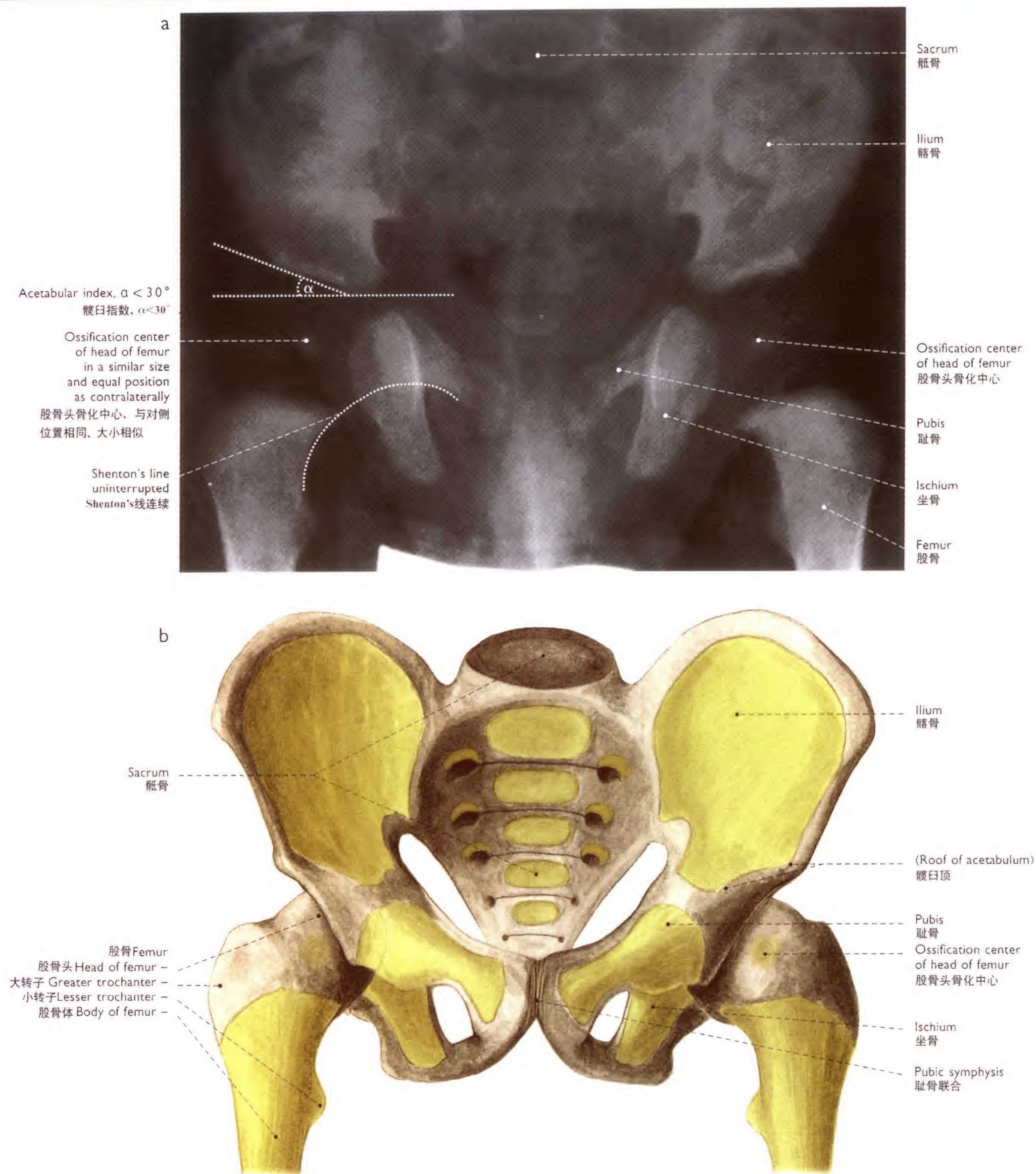
a, b Hip bone of an adult (40%) 成人髌骨

a Lateral aspect 外侧面观

b Medial aspect 内侧面观

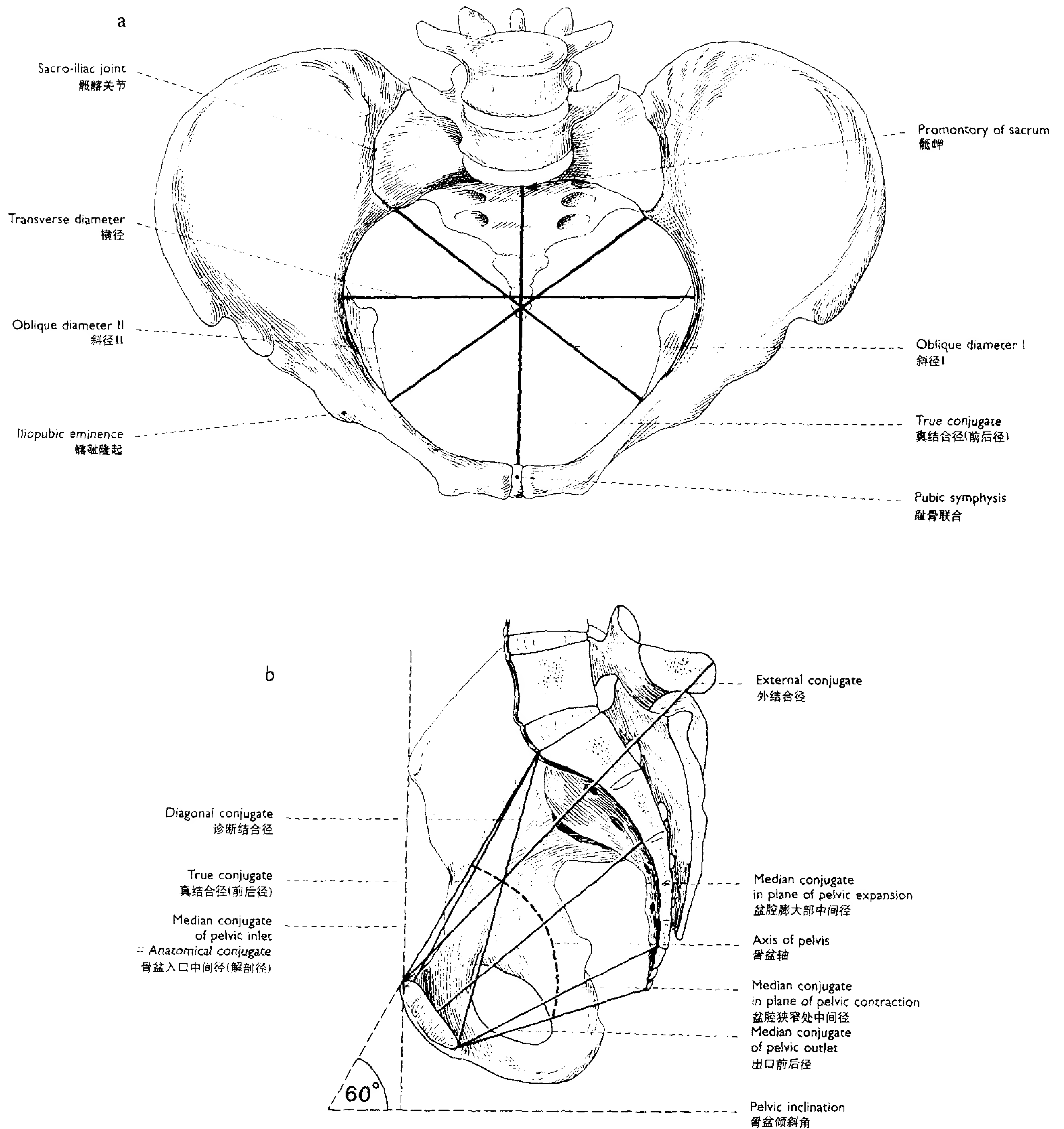
c Hip bone of a 10-year-old child with the typical

Y-shaped epiphysial plate (50%), lateral aspect 10岁儿童髌骨, 可见典型Y形骺板, 外侧面观



177 Pelvic girdle and proximal thigh bones (= femora) of a 3-month-old child (100%) 3个月小孩的骨盆和股骨上端

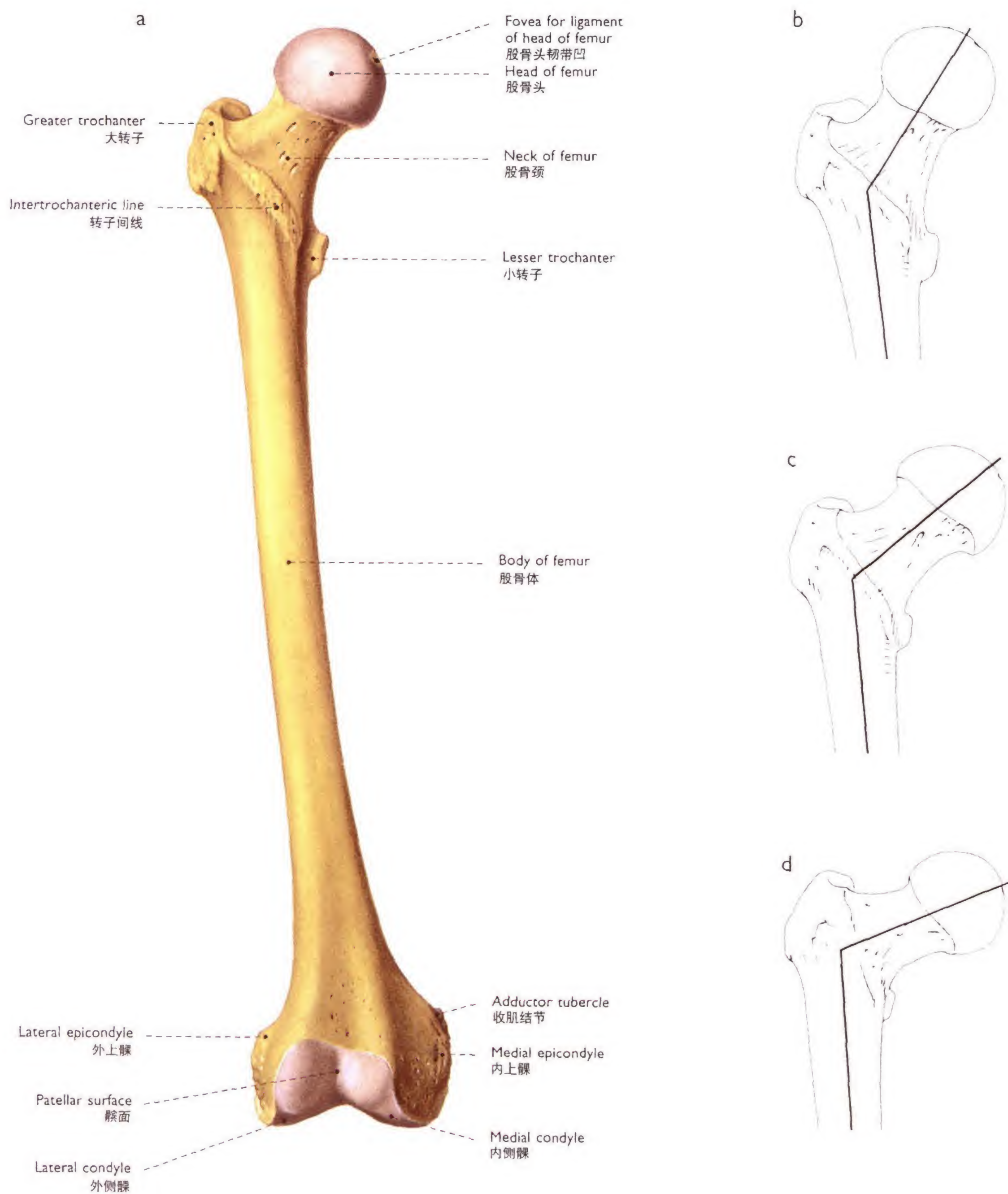
- a Anteroposterior radiograph. On the left side of the picture, 前后位X线片, 图左侧显示的是该年龄髋关节发育正常的数值X线表现
- b Ventral aspect 前面观



178 Pelvis of a female (40%) 女性骨盆

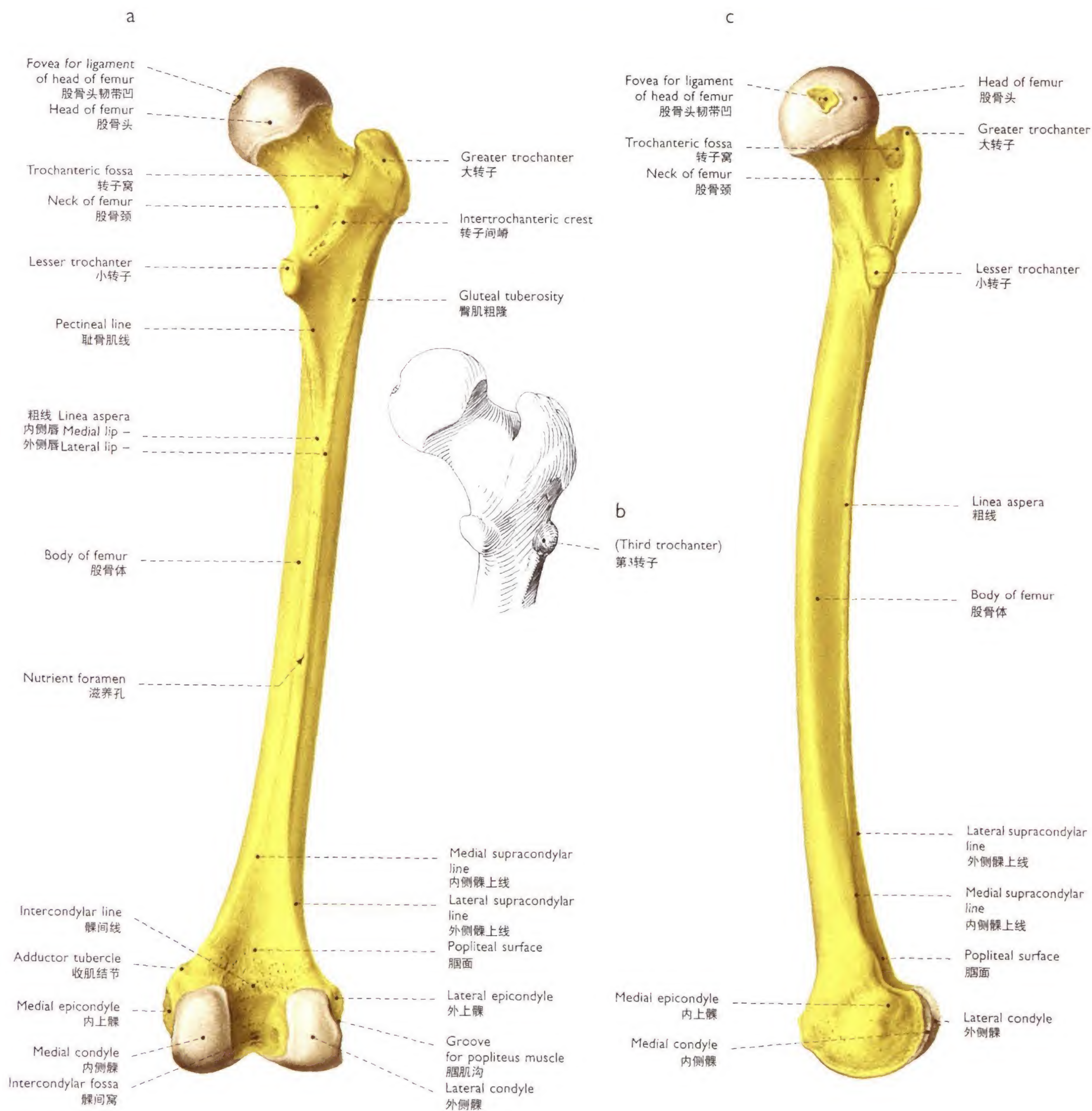
Schematic representations 模式图

- a Diameters of the pelvic inlet, cranial aspect 骨盆入口径线, 上面观
- b Inclination of the pelvis and median conjugates,
medial aspect of a median section 骨盆倾斜角和中间径线, 正中切面内侧面观



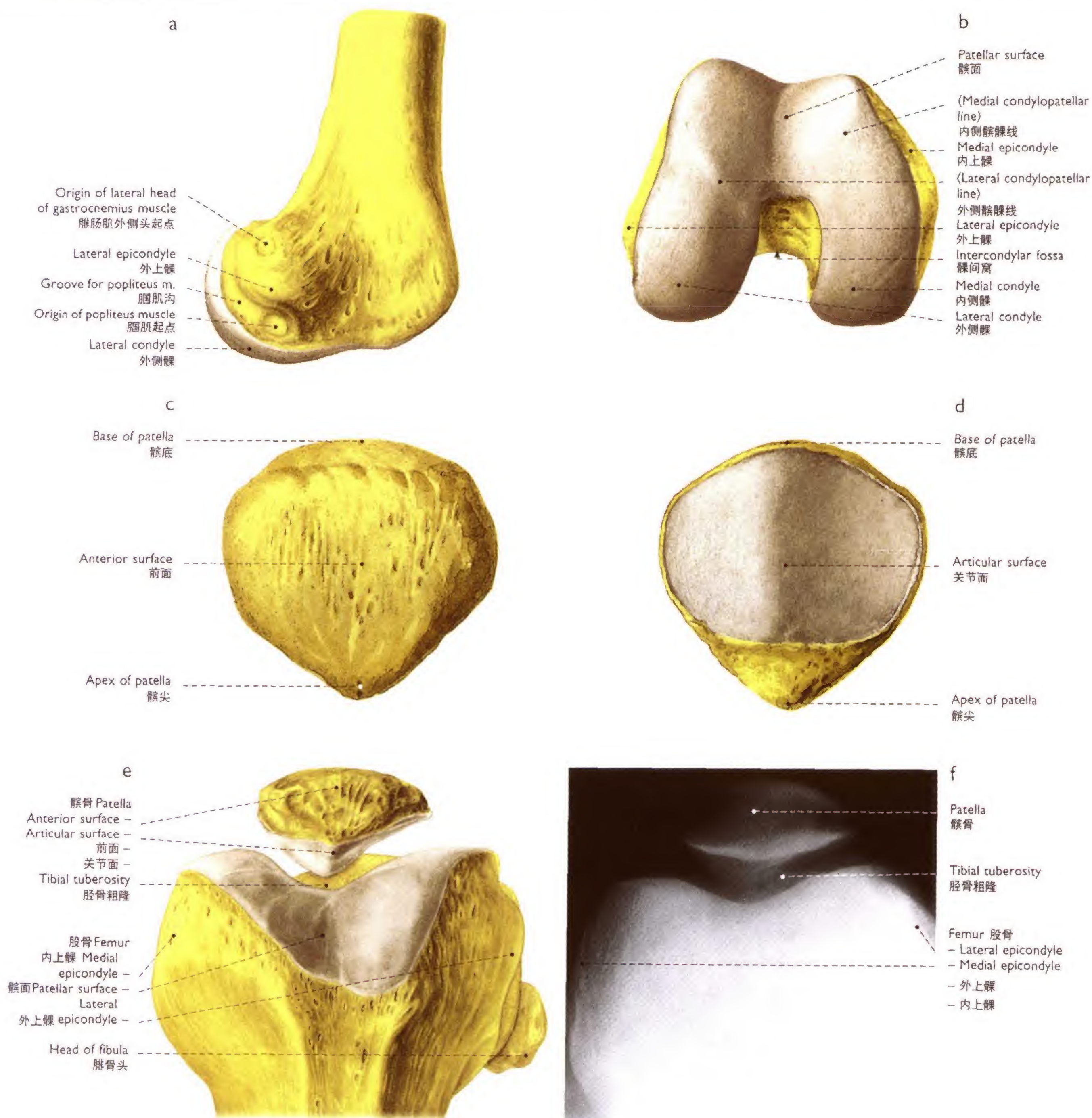
179 Right thigh bone (= femur) (40%) 右股骨

- a Ventral aspect 前面观
- b-d Neck-shaft angle 颈干角
- b 140°, coxa valga 髋外翻140°
- c 124°, within the norm of an adult (120-130°) 124°在成人正常范围内(120°-130°)
- d 108°, coxa vara 髋内翻108°



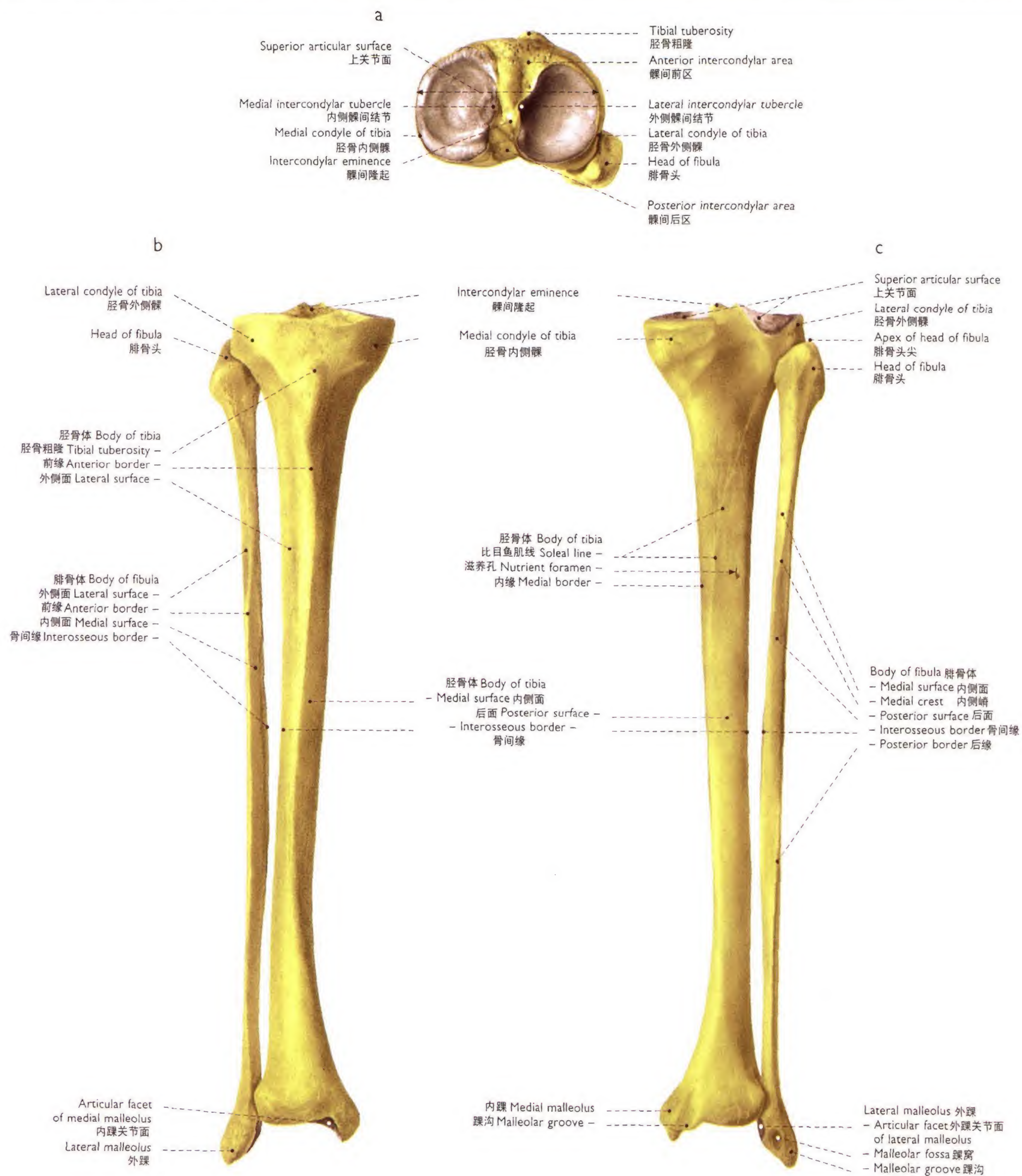
180 Right thigh bone (= femur) (40%) 右股骨

- a Dorsal aspect 后面观
- b Proximal end of the thigh bone with a third trochanter, dorsal aspect 股骨上端有第三转子, 后面观
- c Medial aspect 内侧面观



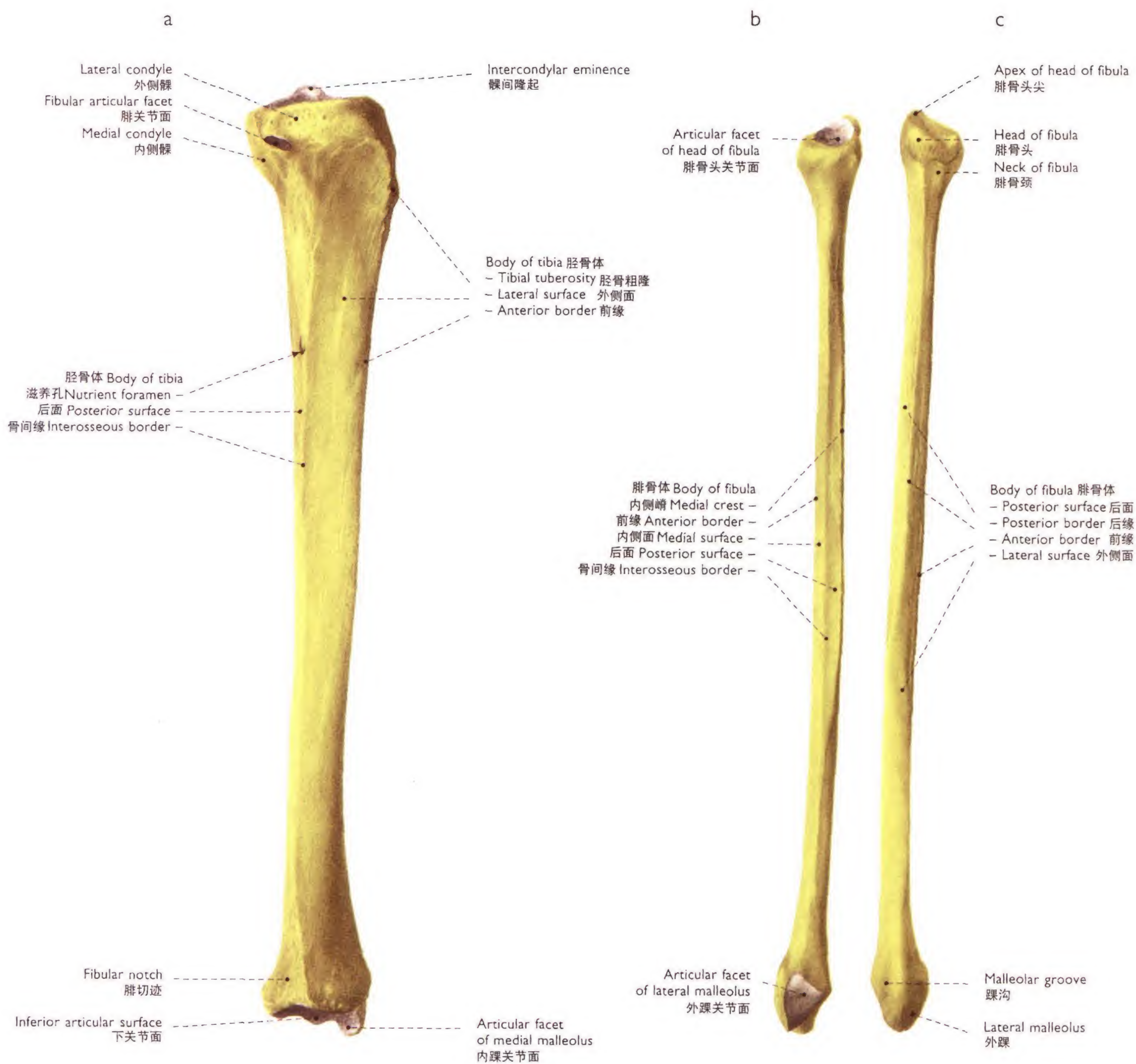
181 Right thigh bone (= femur) and patella 右股骨、髌骨

- a, b Distal end of the thigh bone (60%) 股骨下端
- a Lateral aspect 外侧面观
- b Distal aspect 下面观
- c, d Patella (100%) 髌骨
- c Ventral aspect 前面观
- d Dorsal aspect 后面观
- e, f Patella and distal end of the thigh bone, knee joint in flexion (70%) 髌骨和股骨下端、膝关节屈曲
- e Ventral aspect 前面观
- f 'Tangential' radiograph (inferosuperior projection) 'Tangential' X线片(切线位)



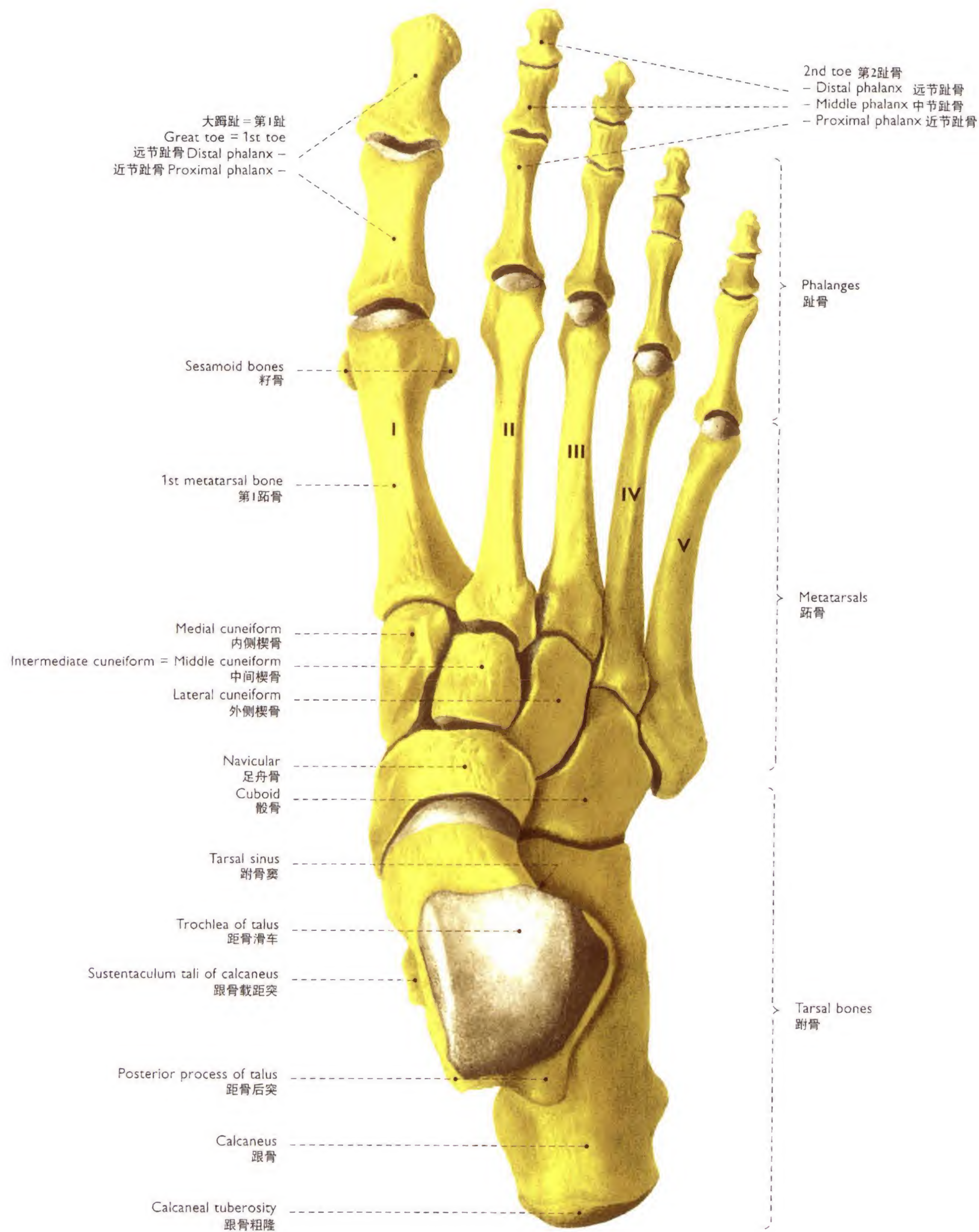
182 Bones of the right leg (40%) 右小腿骨

- a Proximal aspect 上面观
b Ventral aspect 前面观
c Dorsal aspect 后面观



183 Right tibia and fibula (40%) 右胫骨, 腓骨

- a Tibia (= shin bone), lateral aspect 胫骨, 外侧面观
b Fibula (= calf bone), medial aspect 腓骨, 内侧面观
c Fibula (= calf bone), lateral aspect 腓骨, 外侧面观



184 Bones of the right foot (80%) 右足骨
Dorsal aspect 上面观

大脚趾 = 第1趾 Great toe = 1st toe
远节趾骨 Distal phalanx -
近节趾骨 Proximal phalanx -

2nd toe 第2趾
- Distal phalanx 远节趾骨
- Middle phalanx 中节趾骨
- Proximal phalanx 近节趾骨

Sesamoid bones
籽骨

Phalanges
趾骨

1st metatarsal bone
第1跖骨

Metatarsals
跖骨

Medial cuneiform
内侧楔骨

Intermediate cuneiform
= Middle cuneiform
中间楔骨

Lateral cuneiform
外侧楔骨

Navicular
足舟骨

Cuboid
骰骨

Talus
距骨

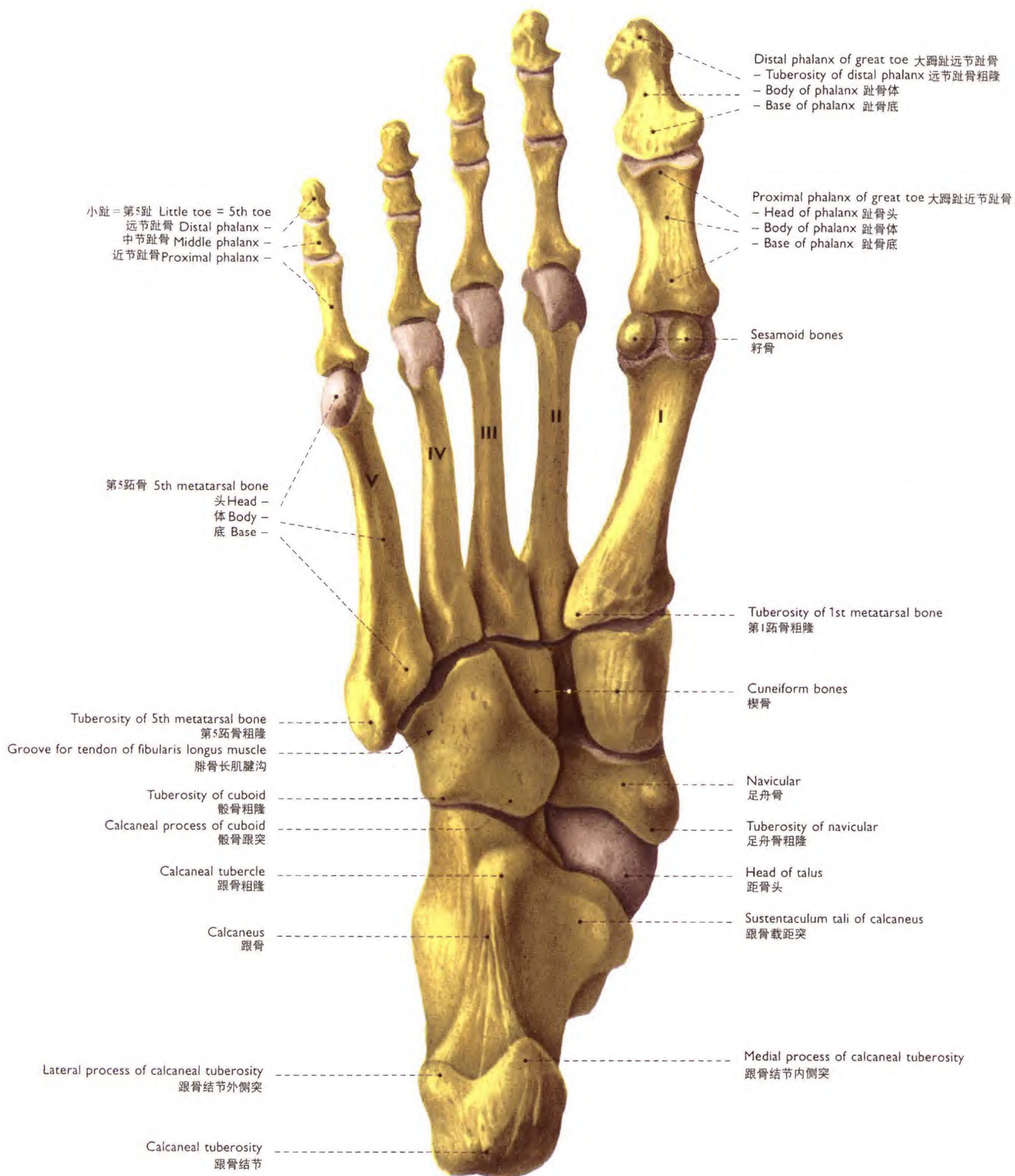
Tarsal bones
跗骨

Calcaneus
跟骨

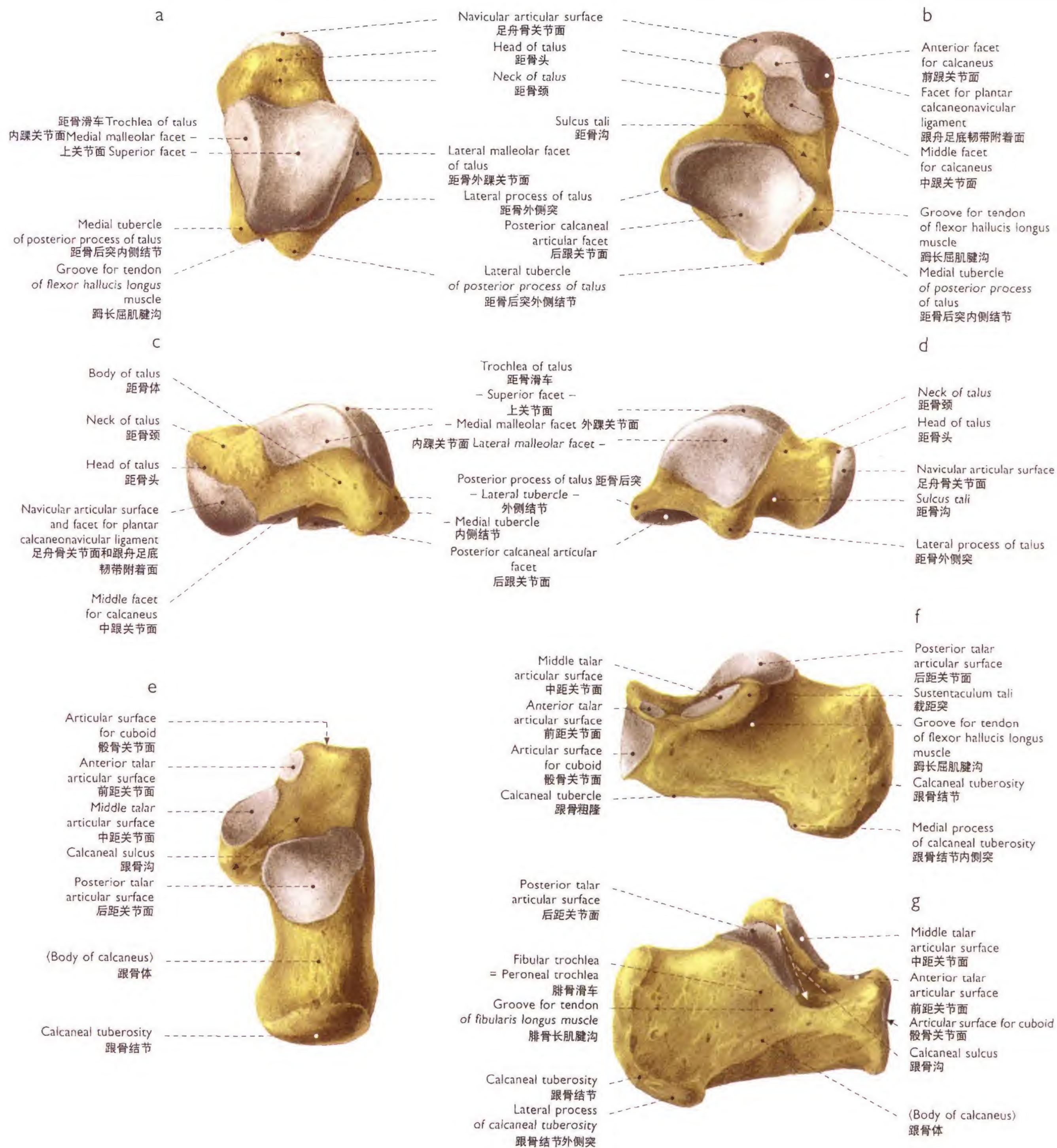
Calcaneal tuberosity
跟骨粗隆



185 Bones of the right foot (80%) 右足骨
Dorsoplantar radiograph 上下位(背跖位)X线片



186 Bones of the right foot (80%) 右足骨
 Plantar aspect 下面观



187 Right talus and calcaneus (75%) 右距骨, 跟骨

a-d Talus (= ankle bone) 距骨(=踝骨)

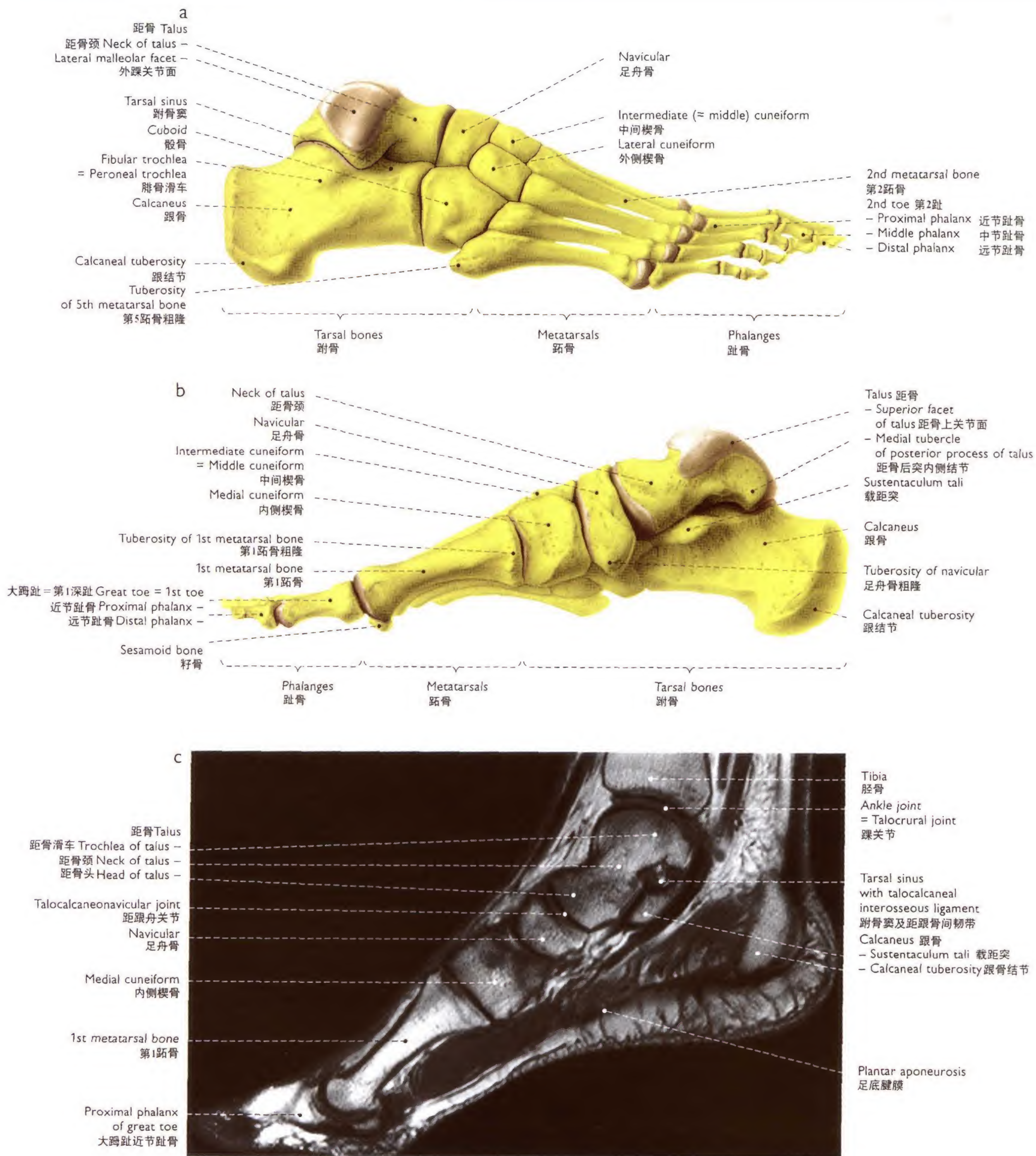
e-g Calcaneus (= heel bone) 跟骨

a, e Proximal aspect 上面观

b Plantar aspect 下面观

c, f Medial aspect 内侧面观

d, g Lateral aspect 外侧面观

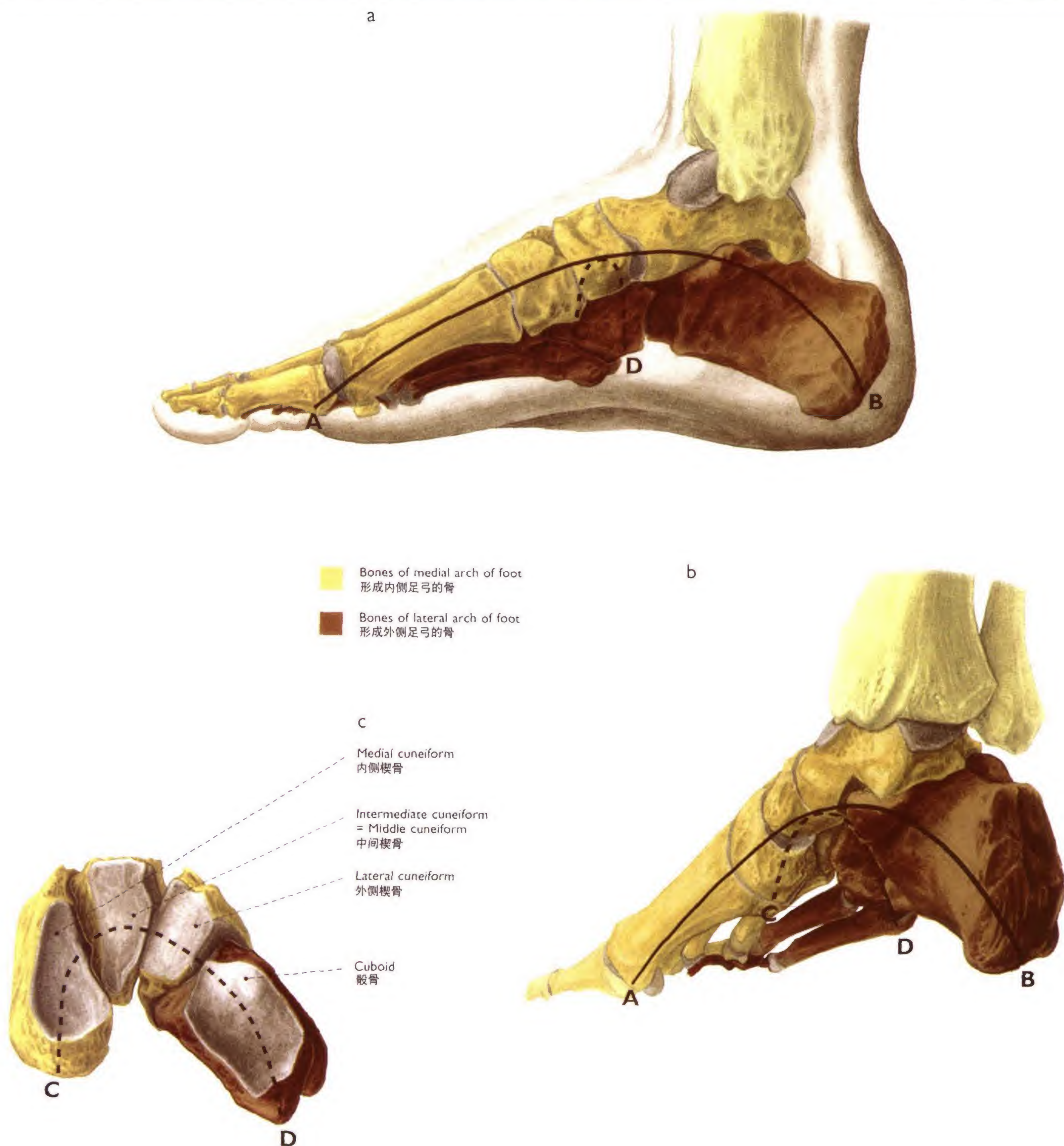


188 Bones of the right foot (45%) 右足骨

a Lateral aspect 外侧面观

b Medial aspect 内侧面观

c Sagittal magnetic resonance image (MRI, T₁-weighted)through the medial part of the right foot, medial aspect 经右足内侧矢状位磁共振图像(MRI, T₁加权), 内侧面观



189 Longitudinal and transverse arches of the skeleton of the right foot 右足形成纵弓和横弓的骨骼

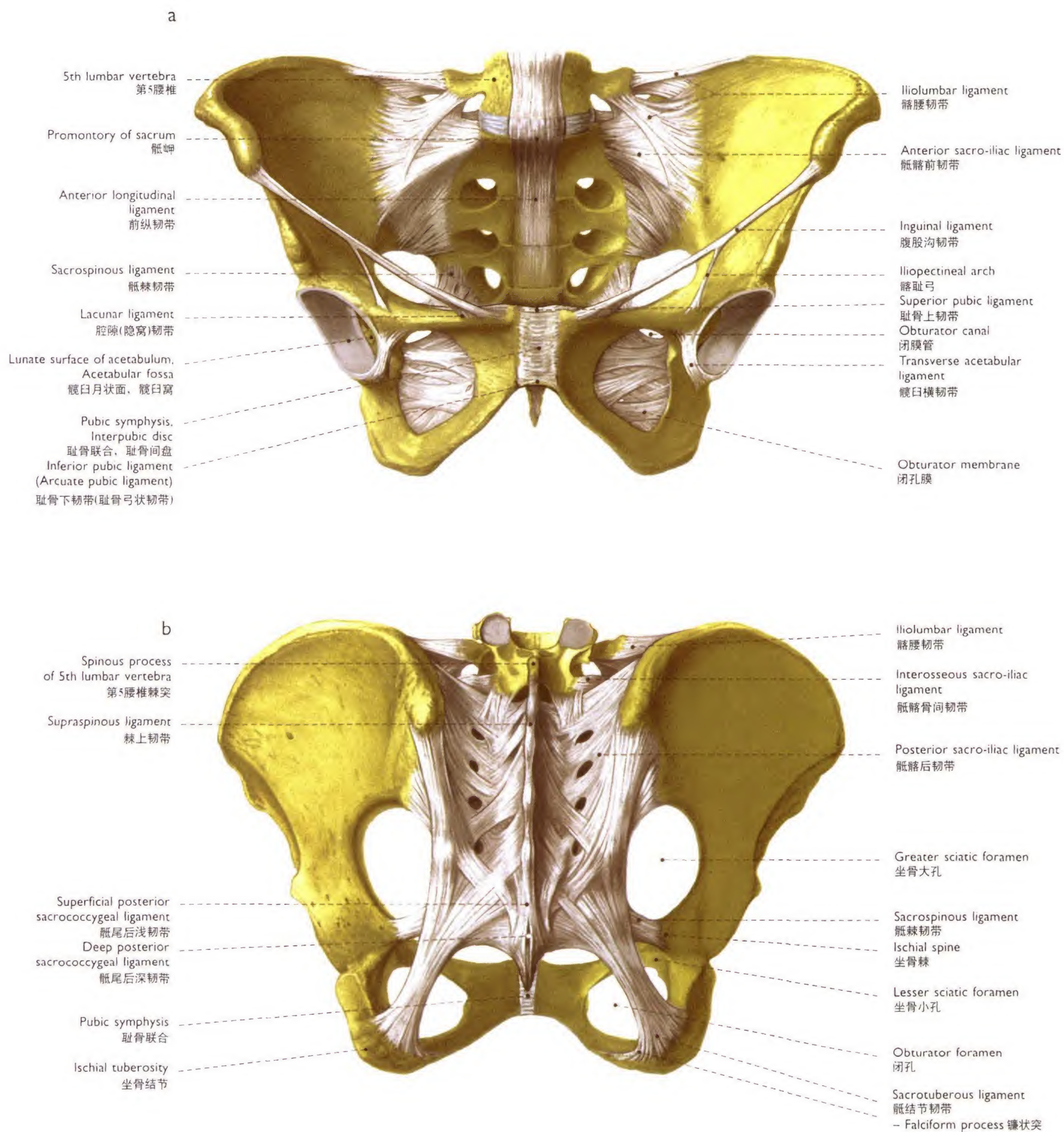
The bones of the medial arch are illustrated in clear brown, those of the lateral arch in dark brown color.

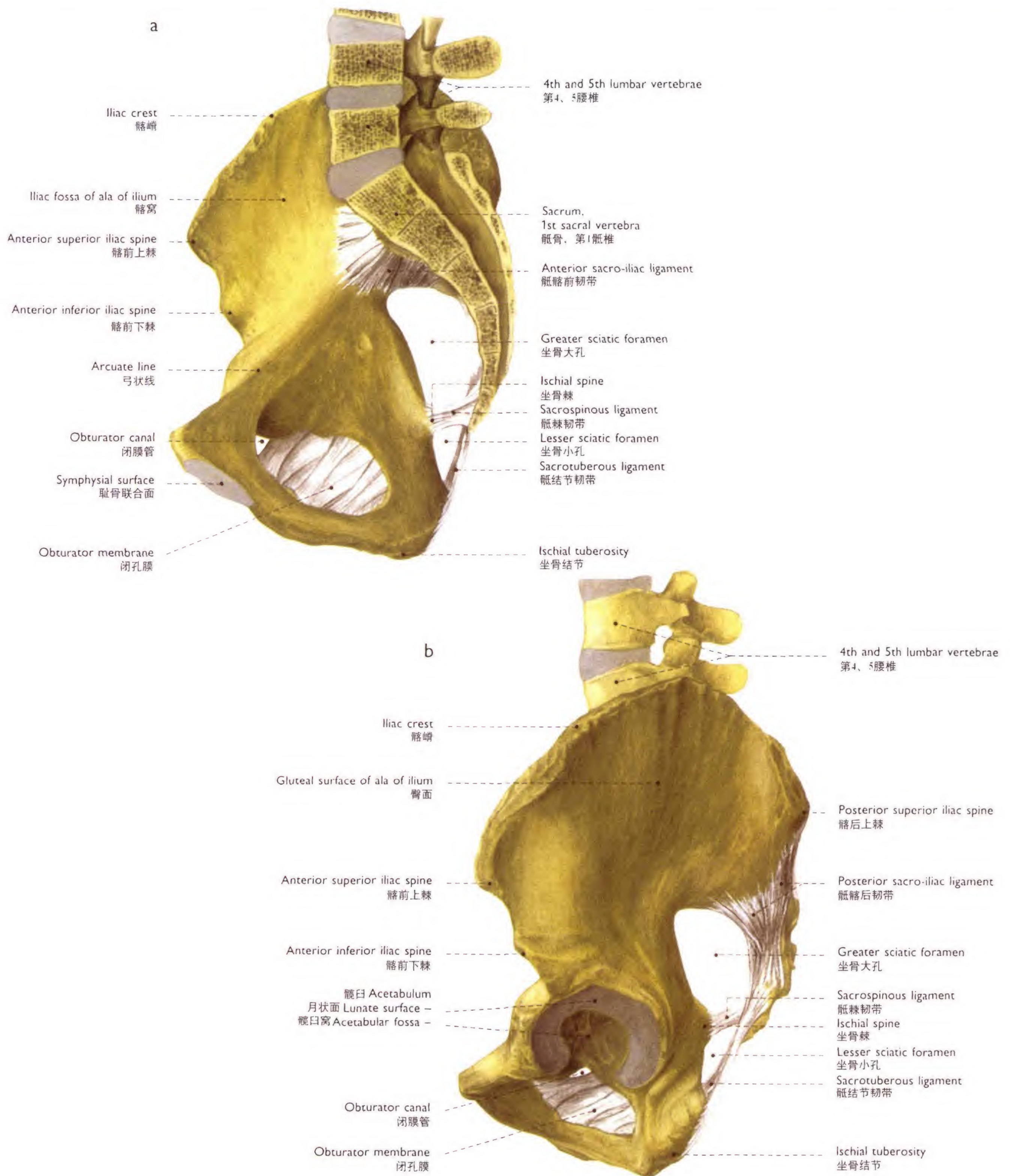
The longitudinal arch is shown by a continuous line (A-B), the transverse arch by a broken line (C-D).

a Medial aspect (55%) 内侧面观

b Mediodorsal aspect (55%) 后内侧面观

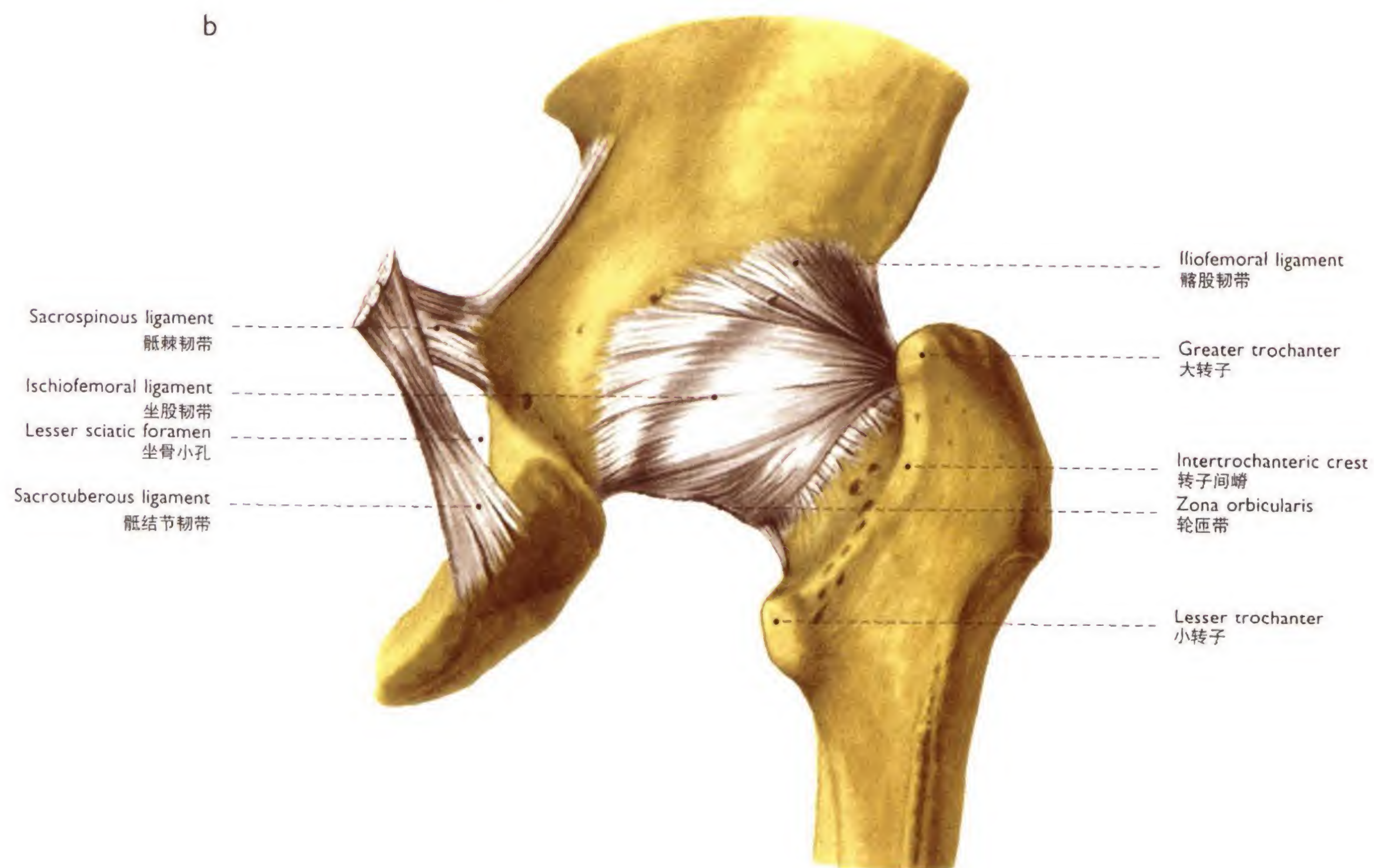
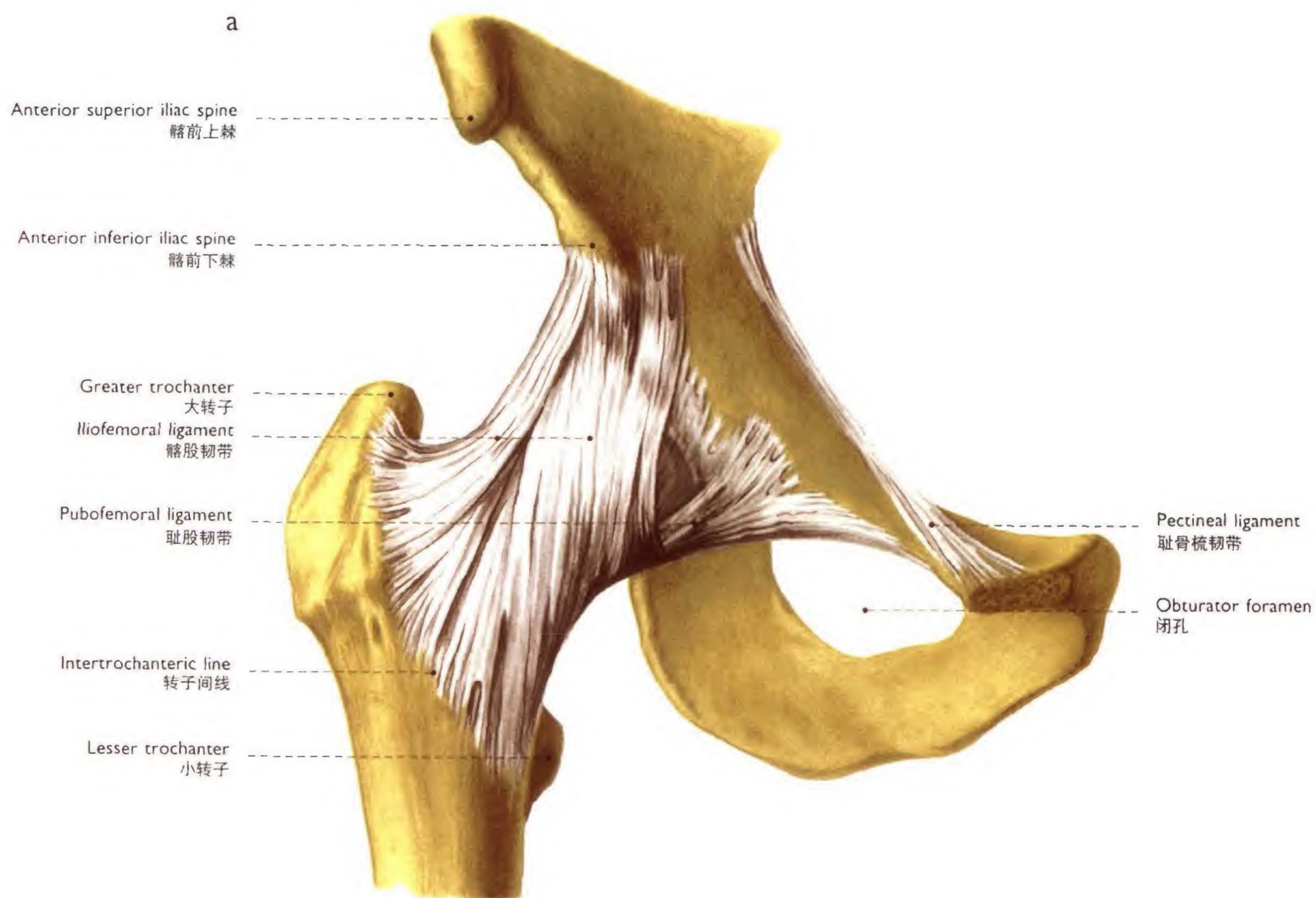
c Proximal aspect of the cuneiform bones and the cuboid bone (85%) 骰骨、楔骨上面观





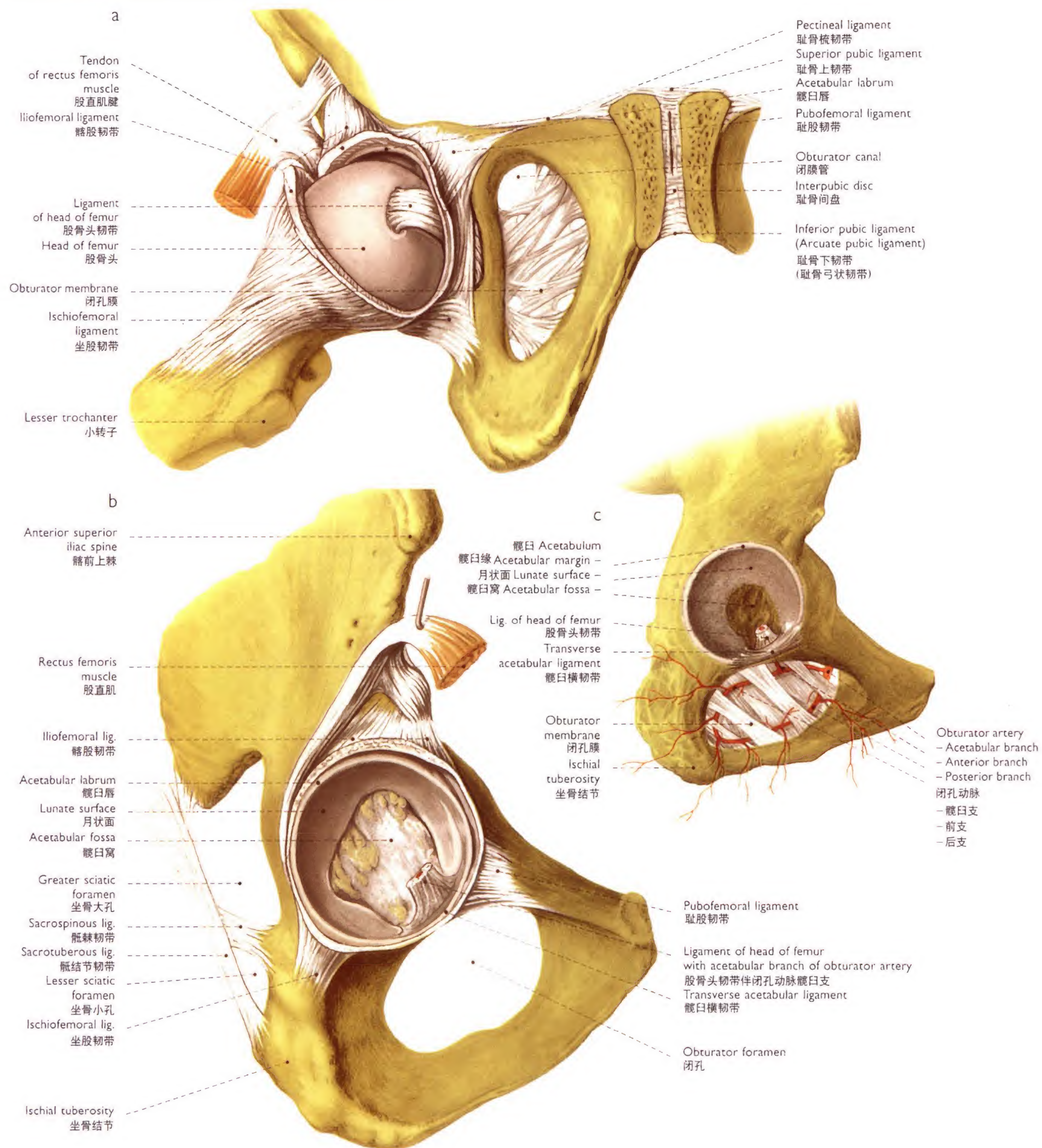
191 Joints and ligaments of the pelvic girdle (45%) 骨盆的关节和韧带

- a Medial aspect of the right half of the pelvis 骨盆右半内侧面观
b Left lateral aspect of the pelvis 骨盆左侧面观



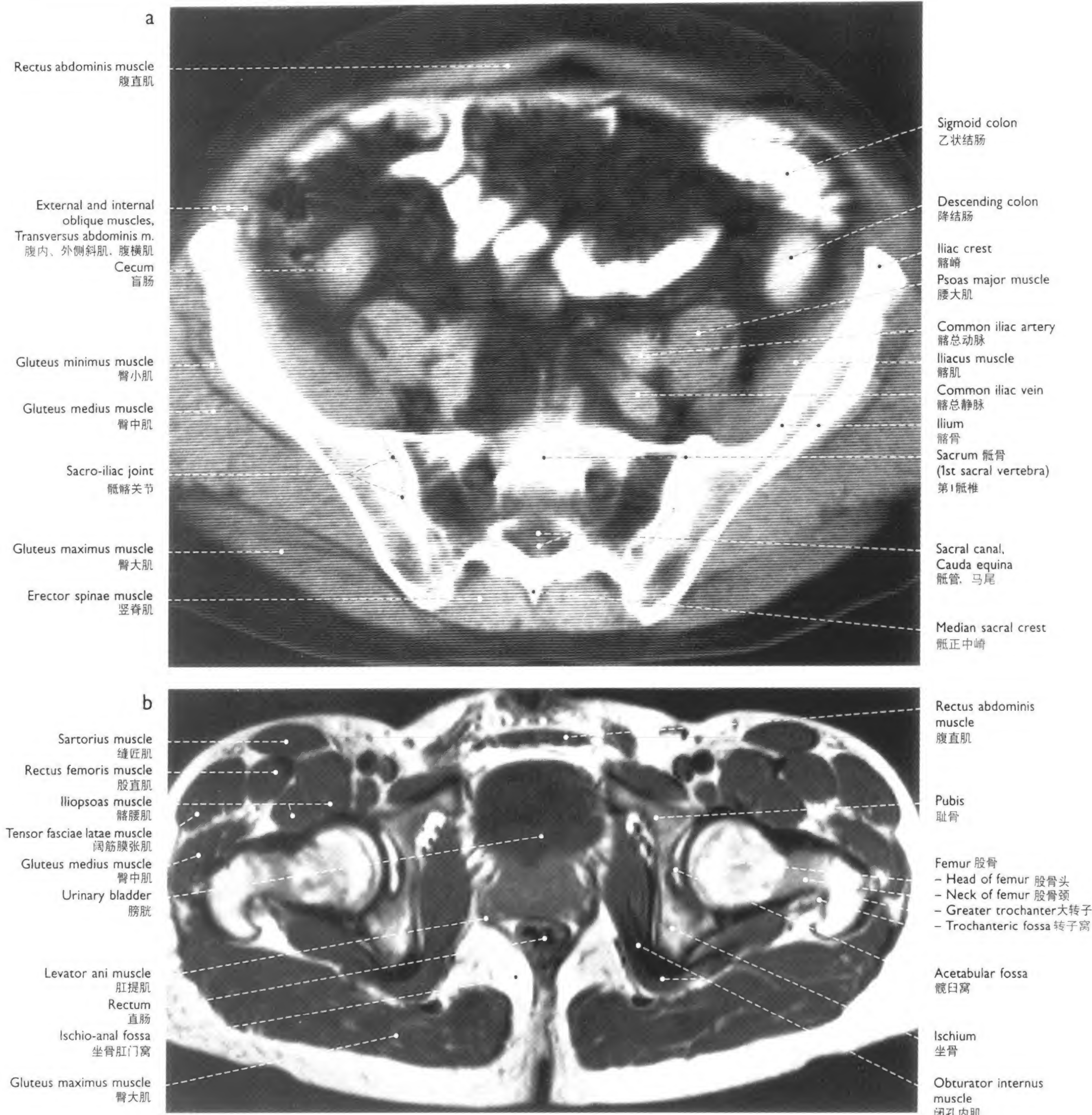
192 Right hip joint (70%) 右髋关节

a Ventral aspect 前面观
b Dorsal aspect 后面观



193 Right hip joint 右髋关节

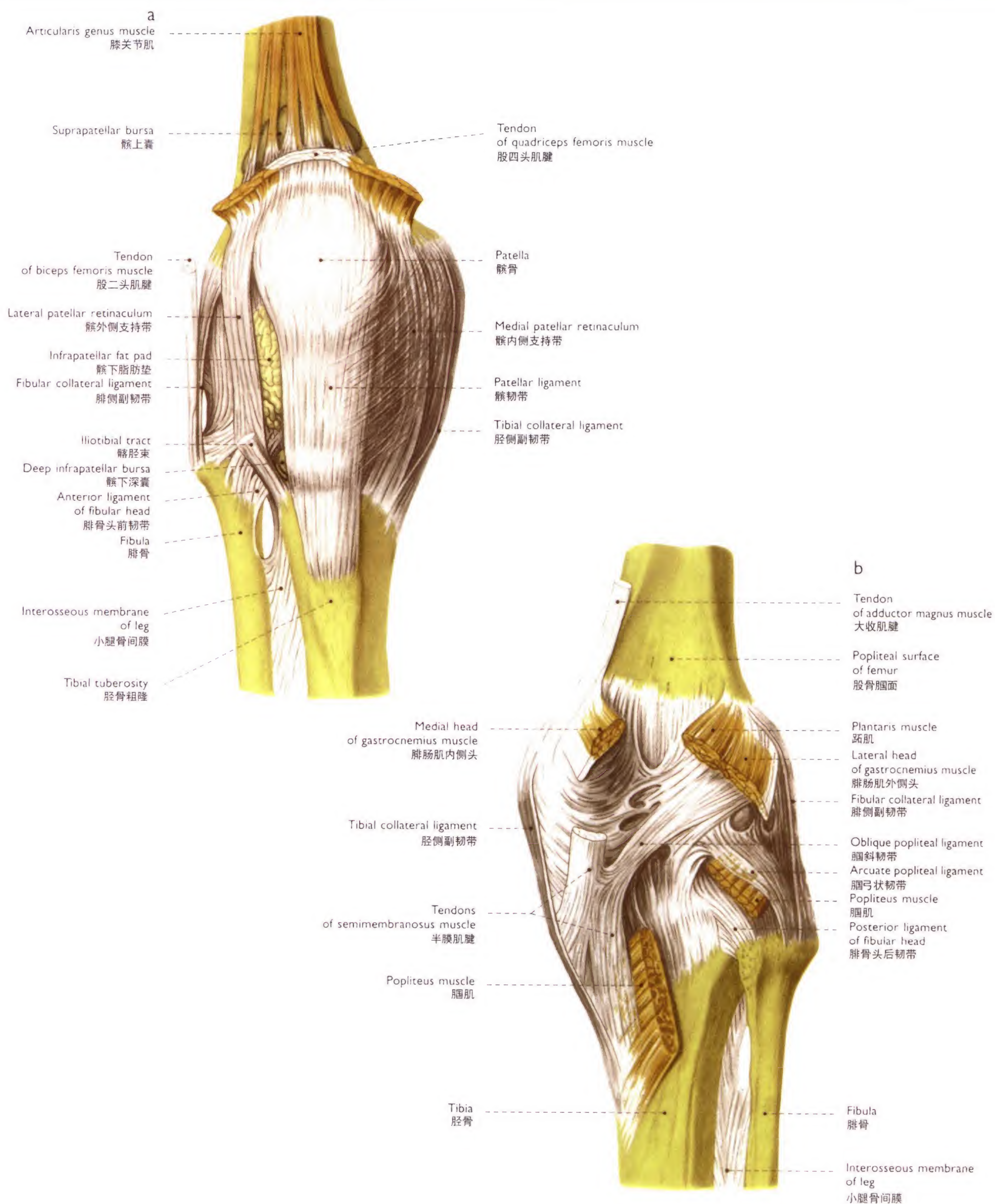
- a The femur was abducted and rotated outwards. The capsule of the hip joint was opened ventrally and the pubic symphysis cut frontally (60%). 股骨外展外旋，髋关节囊从前面切开，耻骨联合从前面切开，前面观
- b View of the socket of hip joint (60%), ventrolateral aspect 髋关节窝，前外侧观
- c Ligament of the head of femur with acetabular artery (35%), ventrolateral aspect 股骨头韧带伴髌臼支，前外侧观



194 Sacro-iliac and hip joints (40%) 骶髂关节和髋关节

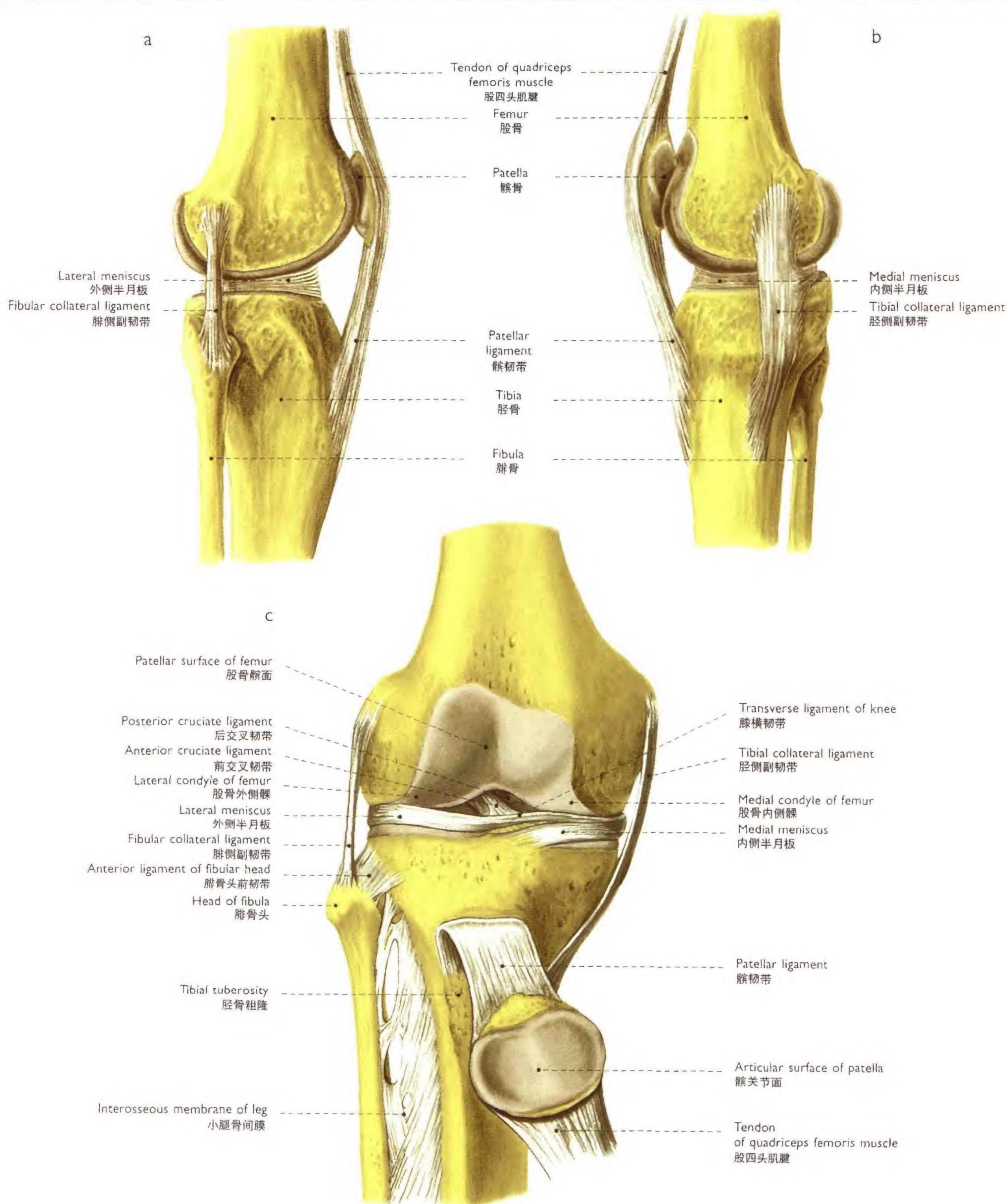
Inferior aspect 下面观

- a Transverse computed tomogram (CT)
showing both sacro-iliac joints 计算机横断层扫描(CT)、显示双侧骶髂关节
- b Transverse magnetic resonance image (MRI, T₁-weighted)
showing both hip joints 磁共振横断层扫描图像(MRI,T₁加权)



195 Right knee joint (70%) 右膝关节

a Ventral aspect 前面观
b Dorsal aspect 后面观



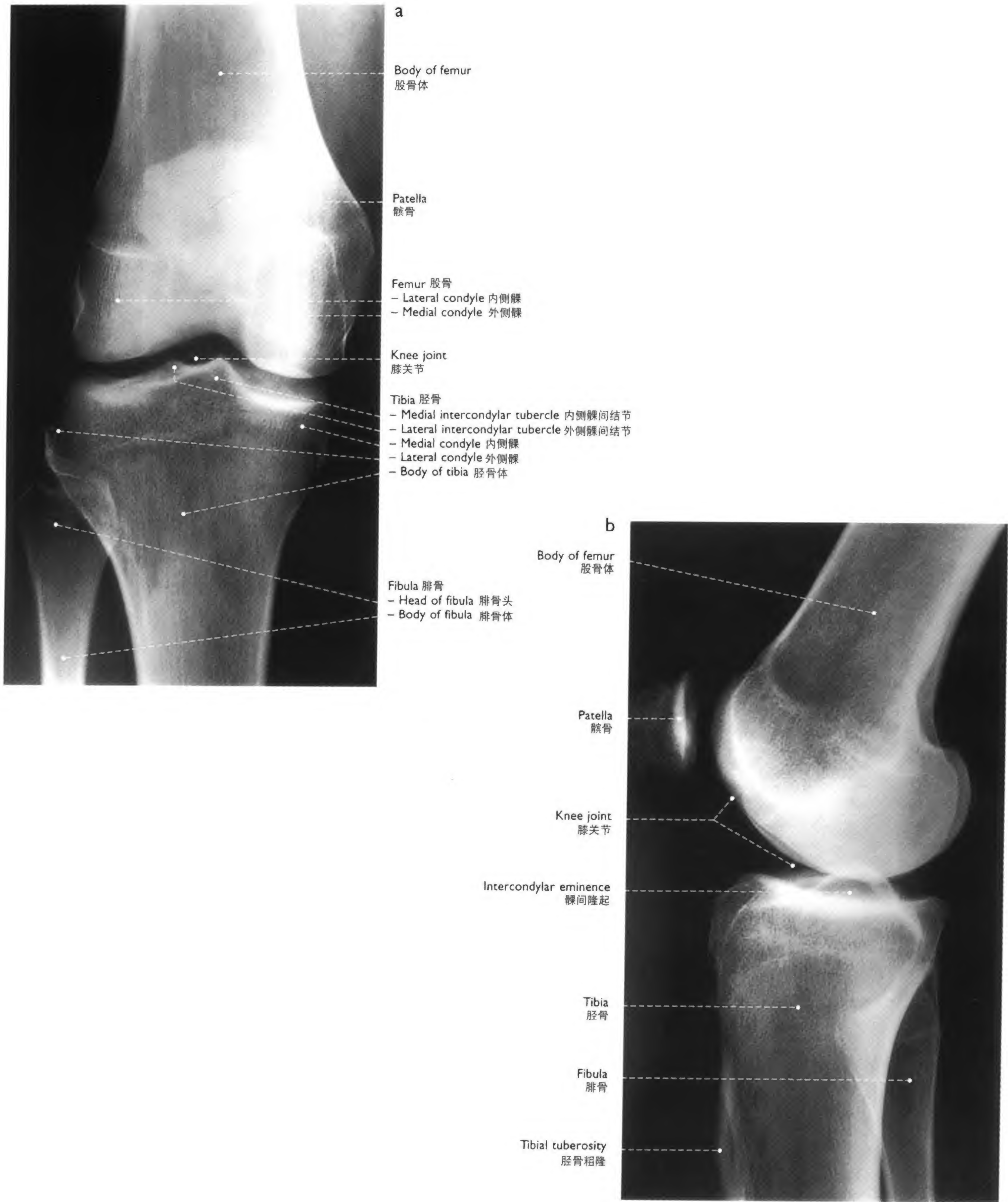
196 Right knee joint 右膝关节

The capsule was removed. 关节囊已切除

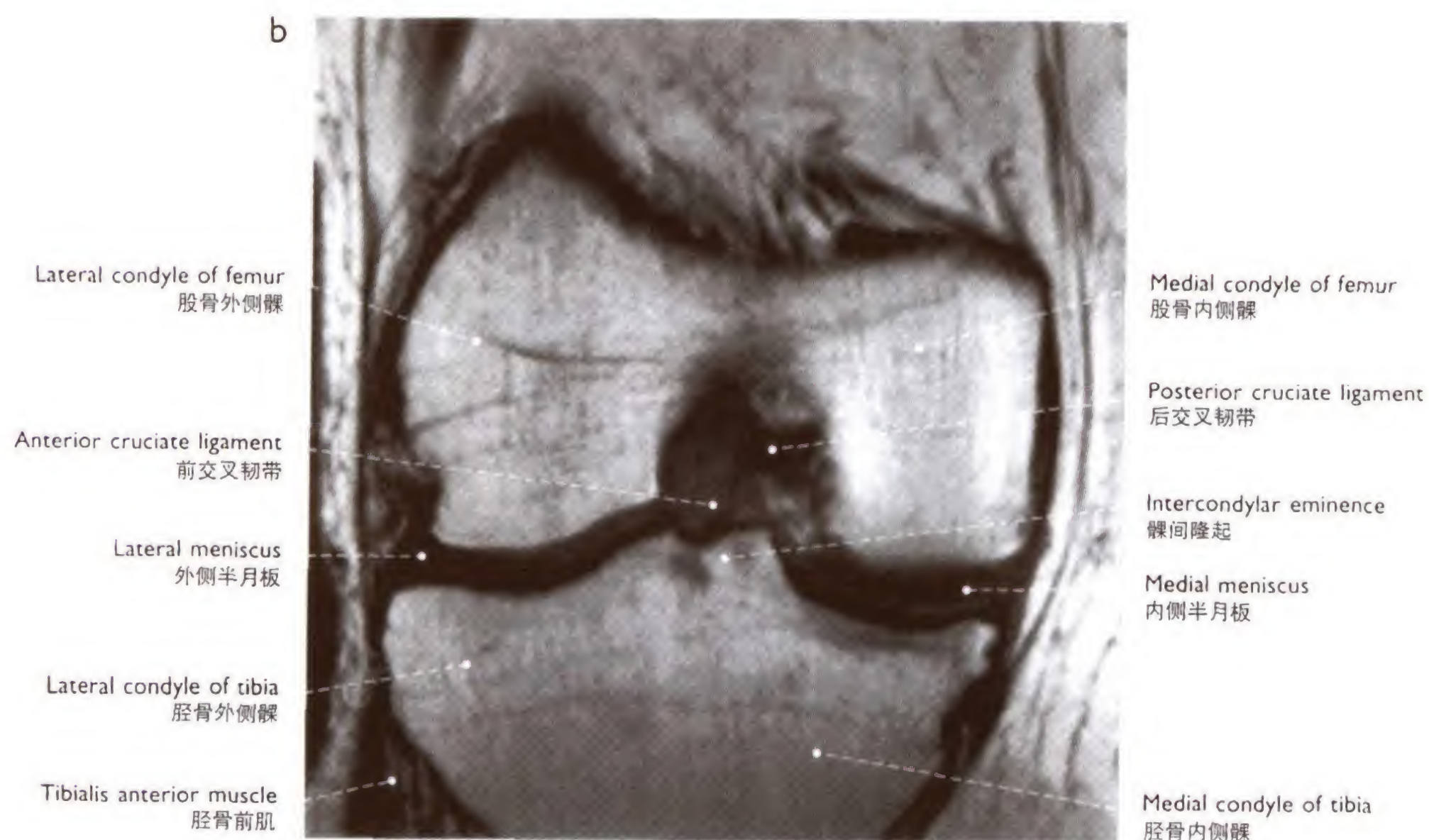
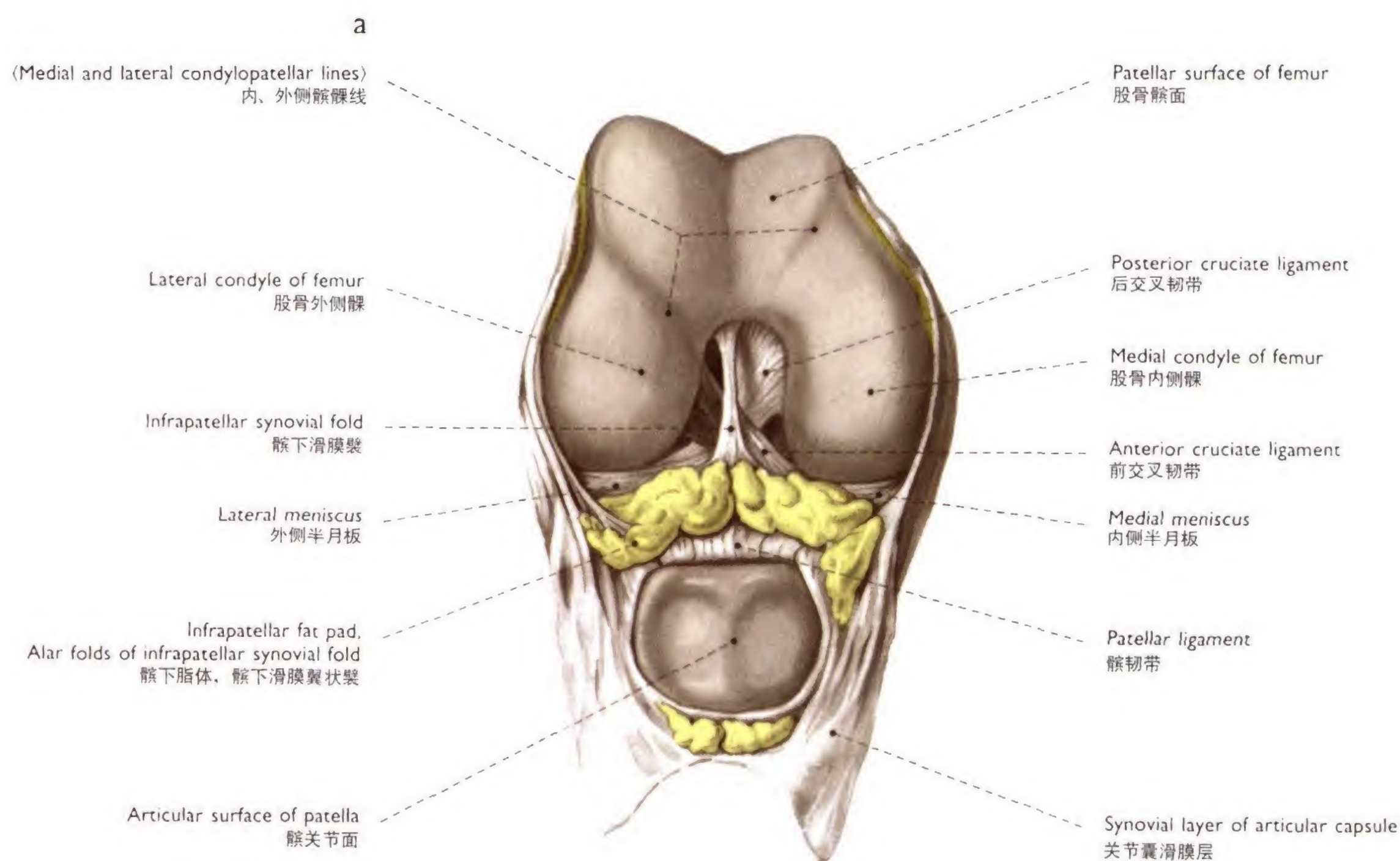
a Lateral aspect (50%) 外侧面观

b Medial aspect (50%) 内侧面观

c The patella was turned downwards (70%). Ventral aspect 髌骨翻向下, 前面观



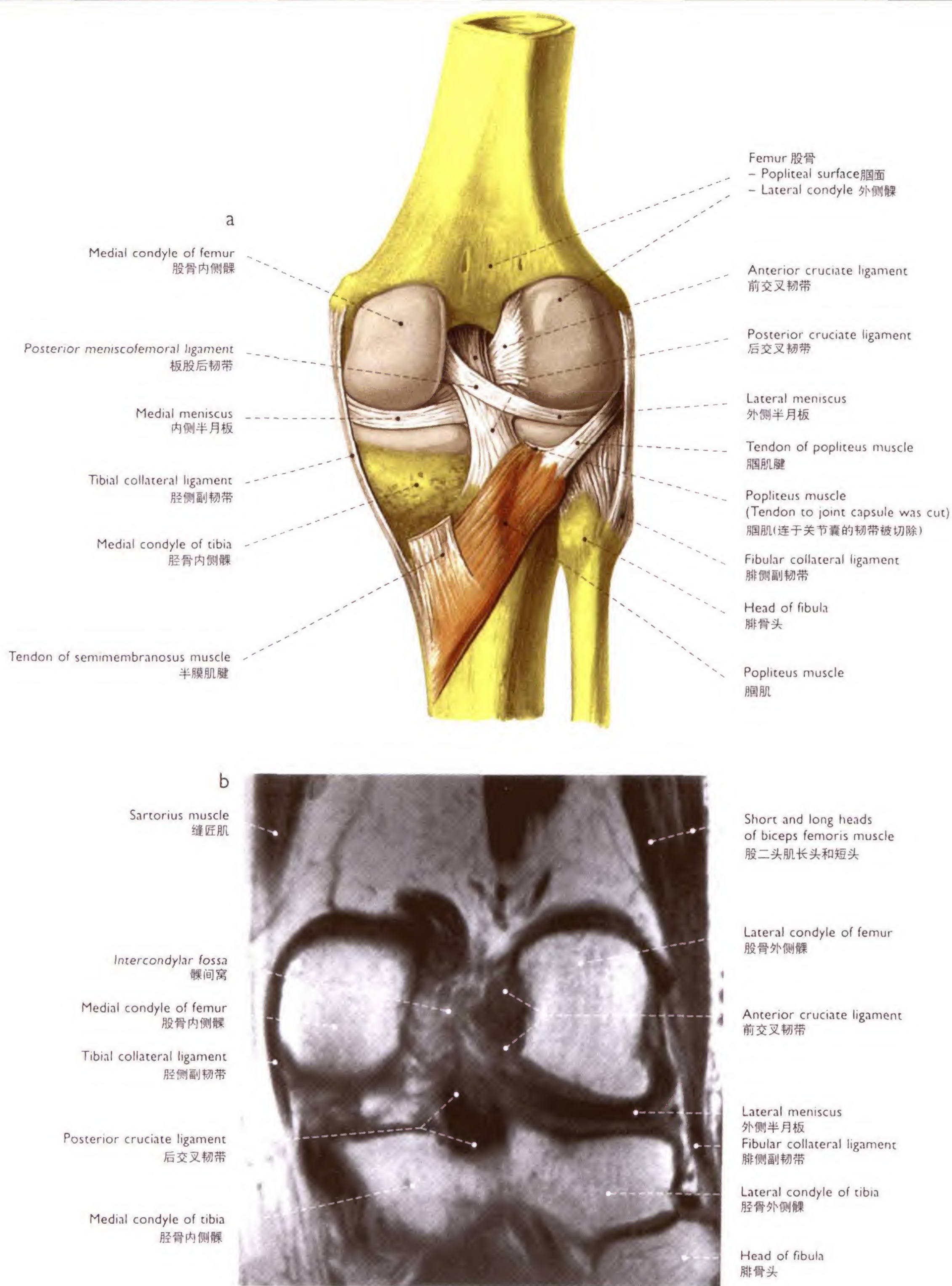
197 Right knee joint (80%) 右
a Anteroposterior radiograph 前后
b Lateral radiograph 侧位X线片



198 Right knee joint 右膝关节

Ventral aspect 前面观

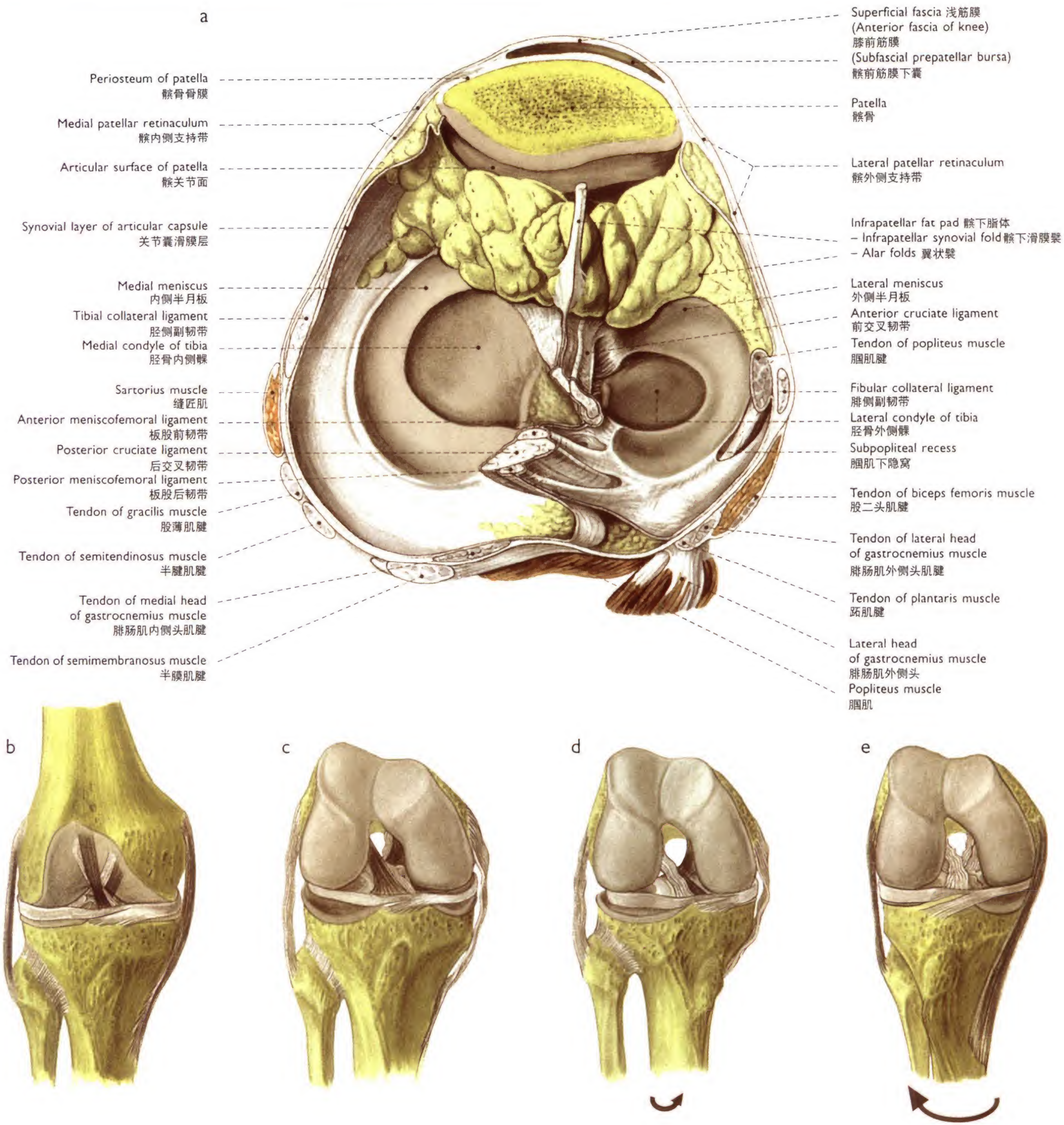
- a The joint is flexed, the capsule was opened and the patella turned downwards (70%). 关节屈曲, 关节囊已打开, 髌骨翻向下
- b Coronal magnetic resonance image (MRI, T₁-weighted) through ventral parts of the knee joint (90%) 经膝关节前部冠状位磁共振图像(MRI, T₁加权)



199 Right knee joint 右膝关节

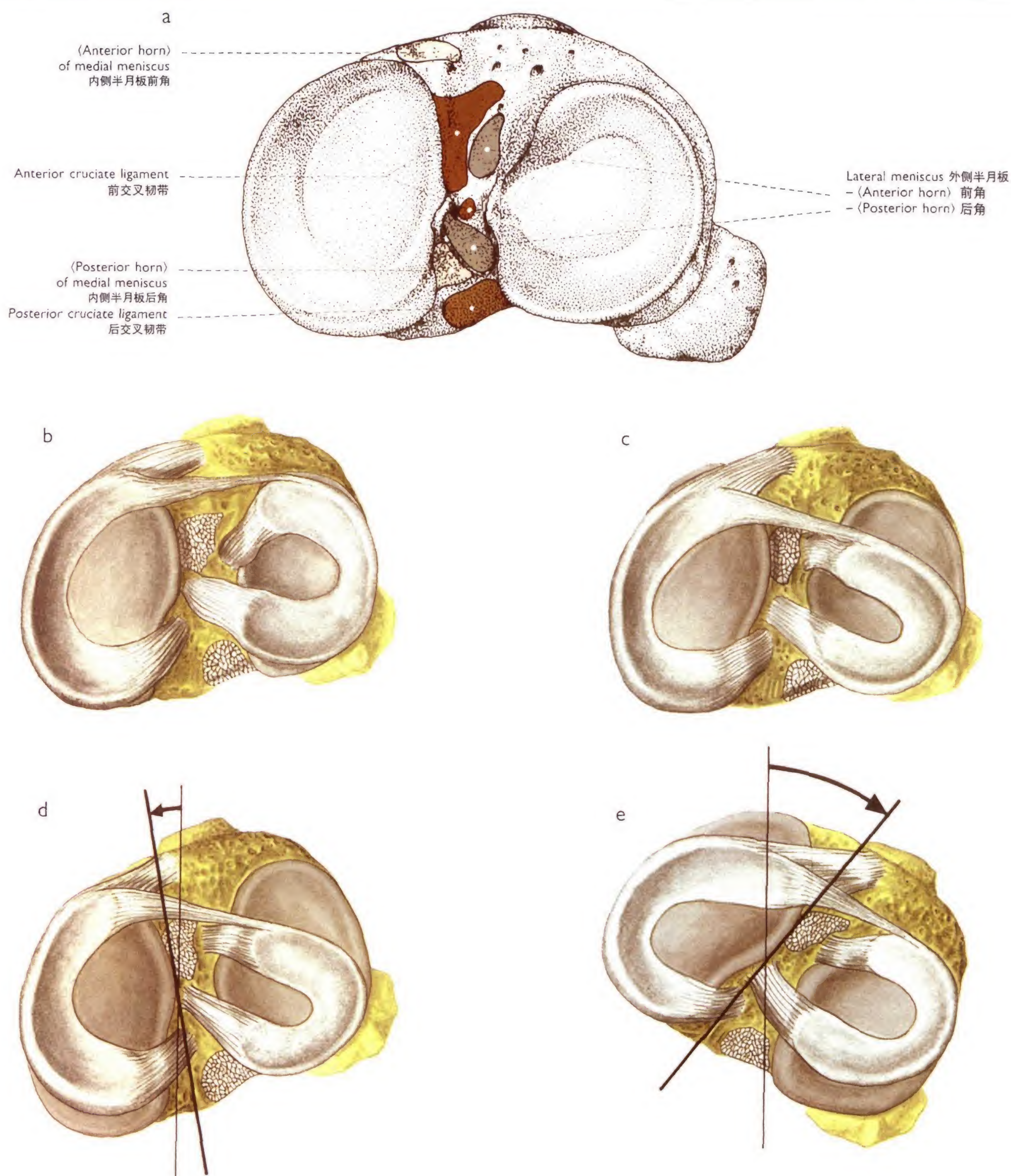
Dorsal aspect 后面观

- a The joint is extended, and the capsule was partially removed (70%). 关节伸直, 关节囊部分切除
- b Coronal magnetic resonance image (MRI, T₁-weighted) through dorsal parts of the knee joint (90%) 经膝关节后部冠状位磁共振图像(MRI, T₁加权)



200 Right knee joint 右膝关节

- a The joint was cut transversally through the middle of the patella (100%).
Cranial aspect of the distal part 经髌骨中间横断膝关节, 上面观
 - b-e State of tautening of the cruciate and collateral ligaments (50%) 副韧带和交叉韧带紧张时的状态
(according to von Lanz and Wachsmuth, 1972) (根据vonLanz和Wach smuth,1972)
 - b knee in extension 关节伸直
 - c knee in flexion 关节屈曲
 - d knee in flexion and medial rotation 关节屈曲内旋
 - e knee in flexion and lateral rotation 关节屈曲外旋
- The taut parts of ligaments are dark-colored. Ventral aspect 紧张的韧带颜色深, 前面观



201 Right knee joint 右膝关节

Cranial aspect 上面观

- a Insertions of the cruciate ligaments and menisci (100%), schematic representation 交叉韧带和半月板的附着点, 示意图
- b-e Position of the menisci (80%) 半月板的位置 (according to von Lanz and Wachsmuth, 1972) (根据 von Lanz 和 Wachsmuth, 1972)
- b knee in extension 膝关节伸直
- c knee in flexion 膝关节屈曲
- d knee in flexion and medial rotation 膝关节屈曲, 内旋
- e knee in flexion and lateral rotation 膝关节屈曲, 外旋



a

Patella
髌骨

Femur 股骨
- Body of femur 股骨体
- Medial condyle 内侧髁

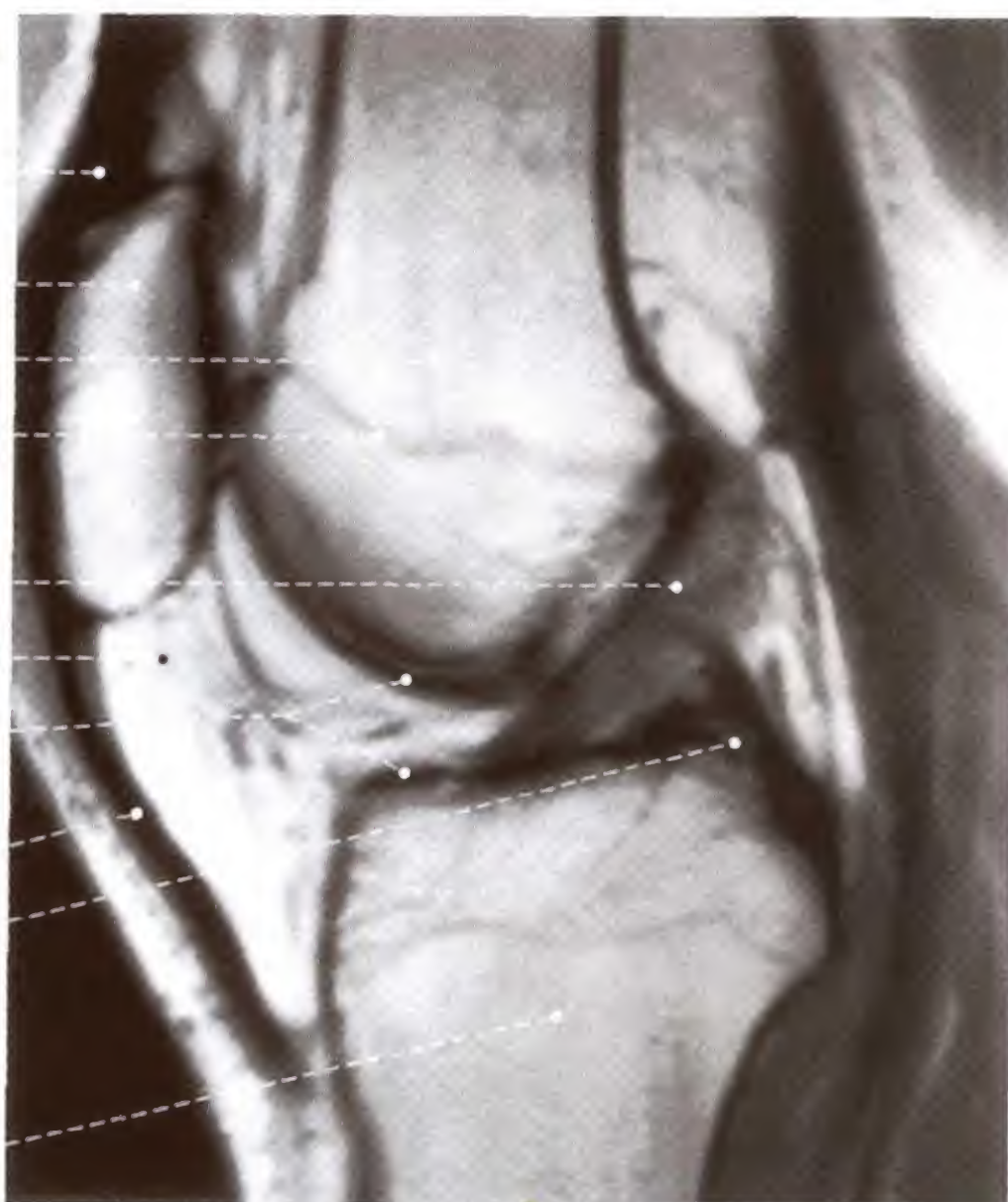
Infrapatellar fat pad
髌下脂体

Medial meniscus
内侧半月板

Articular cartilage
关节软骨

Tibia 胫骨
- Medial condyle 内侧髁
- Epiphysial line 髌线
- Body of tibia 胫骨体

b



Quadriceps femoris muscle
股四头肌

Patella
髌骨

Femur
股骨

Epiphysial line
髌线

Anterior cruciate ligament
前交叉韧带

Infrapatellar fat pad
髌下脂体

Articular cartilage
关节软骨

Patellar ligament
髌韧带

Posterior cruciate ligament
后交叉韧带

Body of tibia
胫骨体



c

Patella
髌骨

Femur 股骨
- Body of femur 股骨体
- Lateral condyle 外侧髁

Infrapatellar fat pad
髌下脂体

Articular cartilage
关节软骨

Lateral meniscus
外侧半月板

Tibia 胫骨
- Lateral condyle 外侧髁
- Epiphysial line 髌线
- Body of tibia 胫骨体

Head of fibula
腓骨头

202 Right knee joint (80%) 右膝关节

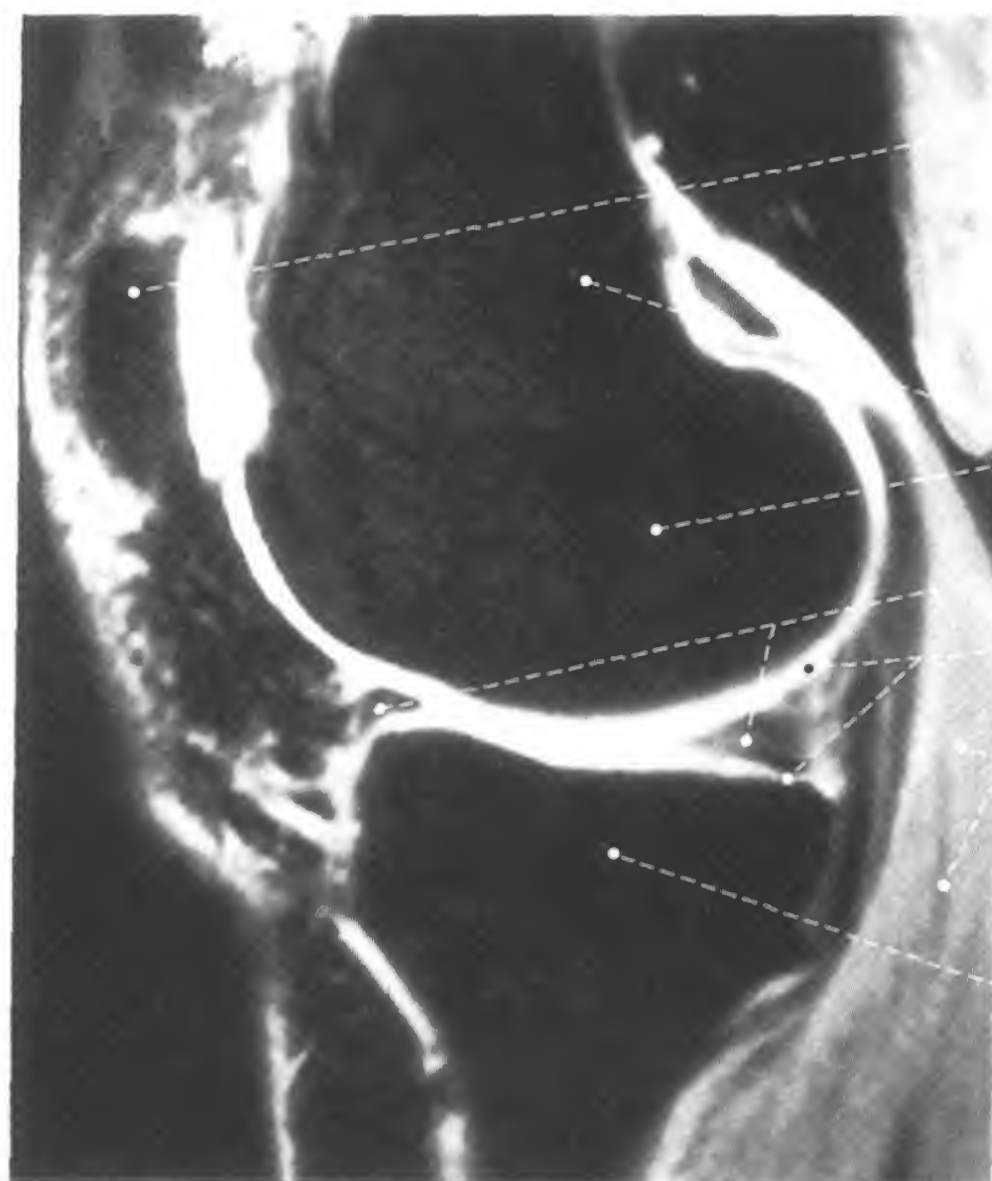
Sagittal magnetic resonance images (MRI, ¹H-weighted) through the 矢状位磁共振图像(MRI, ¹H加权), 分别经

a medial part of the knee joint 膝关节内侧部

b middle part of the knee joint 膝关节中间部

c lateral part of the knee joint. 膝关节外侧部

Bones and fat can be well recognized. 骨和脂肪显影良好



a

Patella
髌骨

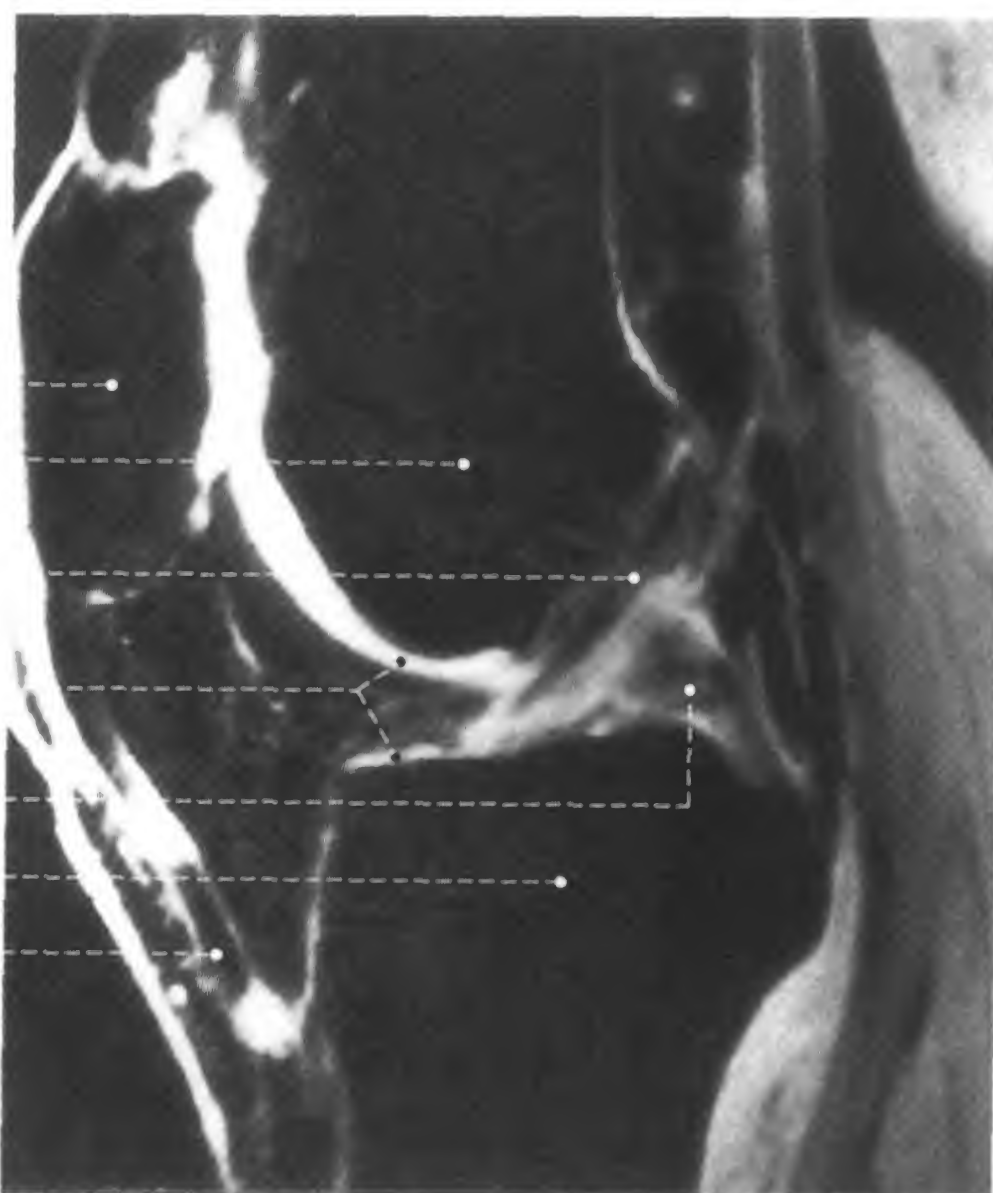
Femur 股骨
- Body of femur 股骨体
- Medial condyle 内侧髁

Medial meniscus
内侧半月板
Articular cartilage
关节软骨

Triceps surae muscle,
Medial head
of gastrocnemius muscle
小腿三头肌, 腓肠肌内侧头

Medial condyle of tibia
胫骨内侧髁

b



Patella
髌骨
Femur
股骨

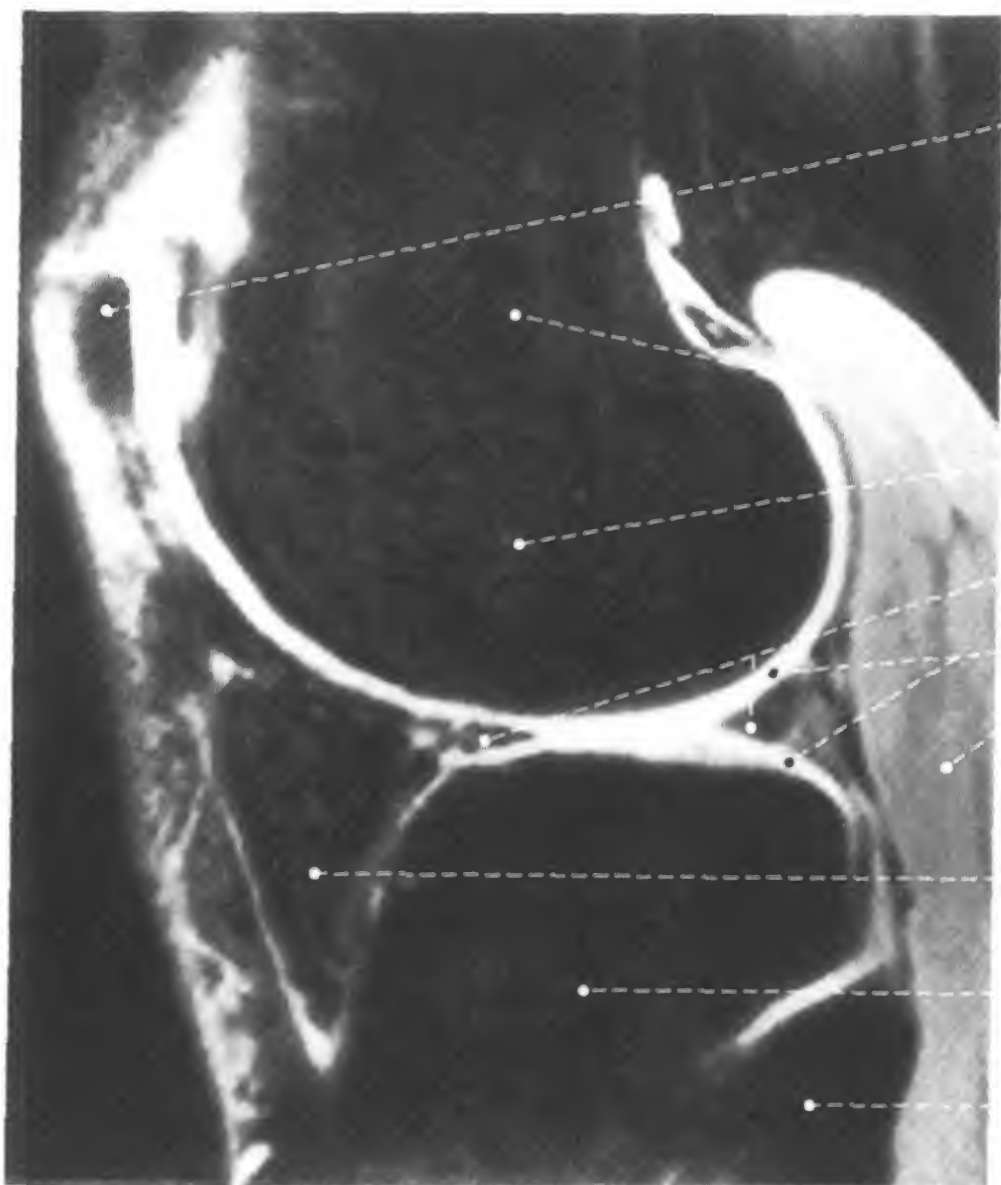
Anterior cruciate ligament
前交叉韧带

Articular cartilage
关节软骨

Posterior cruciate ligament
后交叉韧带

Tibia
胫骨

Patellar ligament
髌韧带



c

Patella
髌骨

Femur 股骨
- Body of femur 股骨体
- Lateral condyle 外侧髁

Lateral meniscus
外侧半月板
Articular cartilage
关节软骨

Triceps surae muscle,
Lateral head
of gastrocnemius muscle
小腿三头肌, 腓肠肌外侧头
Infrapatellar fat pad
髌下脂体

Lateral condyle of tibia
胫骨外侧髁

Head of fibula
腓骨头

203 Right knee joint (80%) 右膝关节

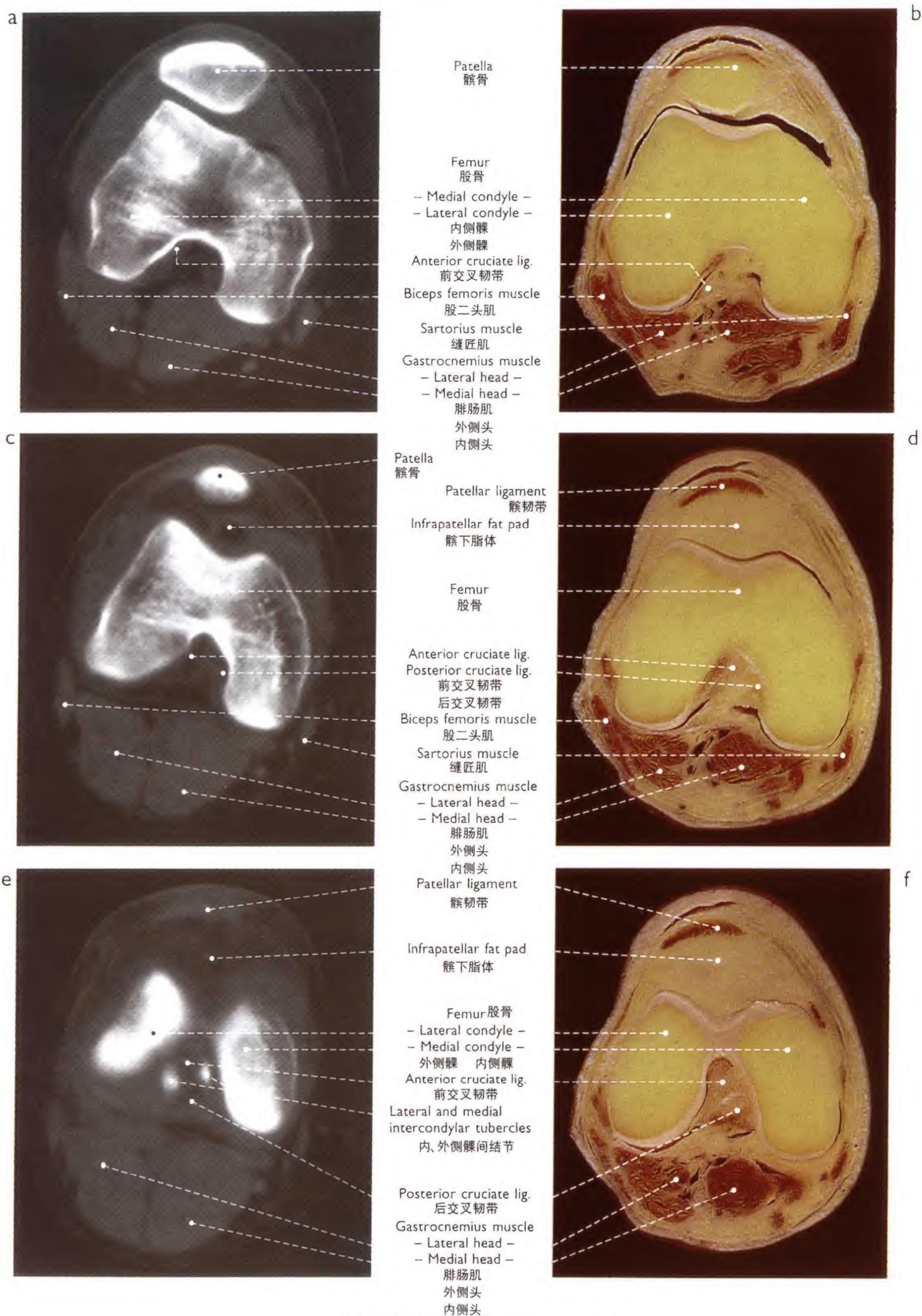
Sagittal magnetic resonance images (MRI, T₁-weighted, fat-suppressed) through the 矢状位磁共振图像(MRI, T₁加权), 经

a medial part of the knee joint 膝关节内侧部

b middle part of the knee joint 膝关节中间部

c lateral part of the knee joint 膝关节外侧部

Cartilaginous and muscular structures can be well recognized. 软骨和肌肉显影良好



204 Right knee joint (65%) 右膝关节

Inferior aspect 下面观

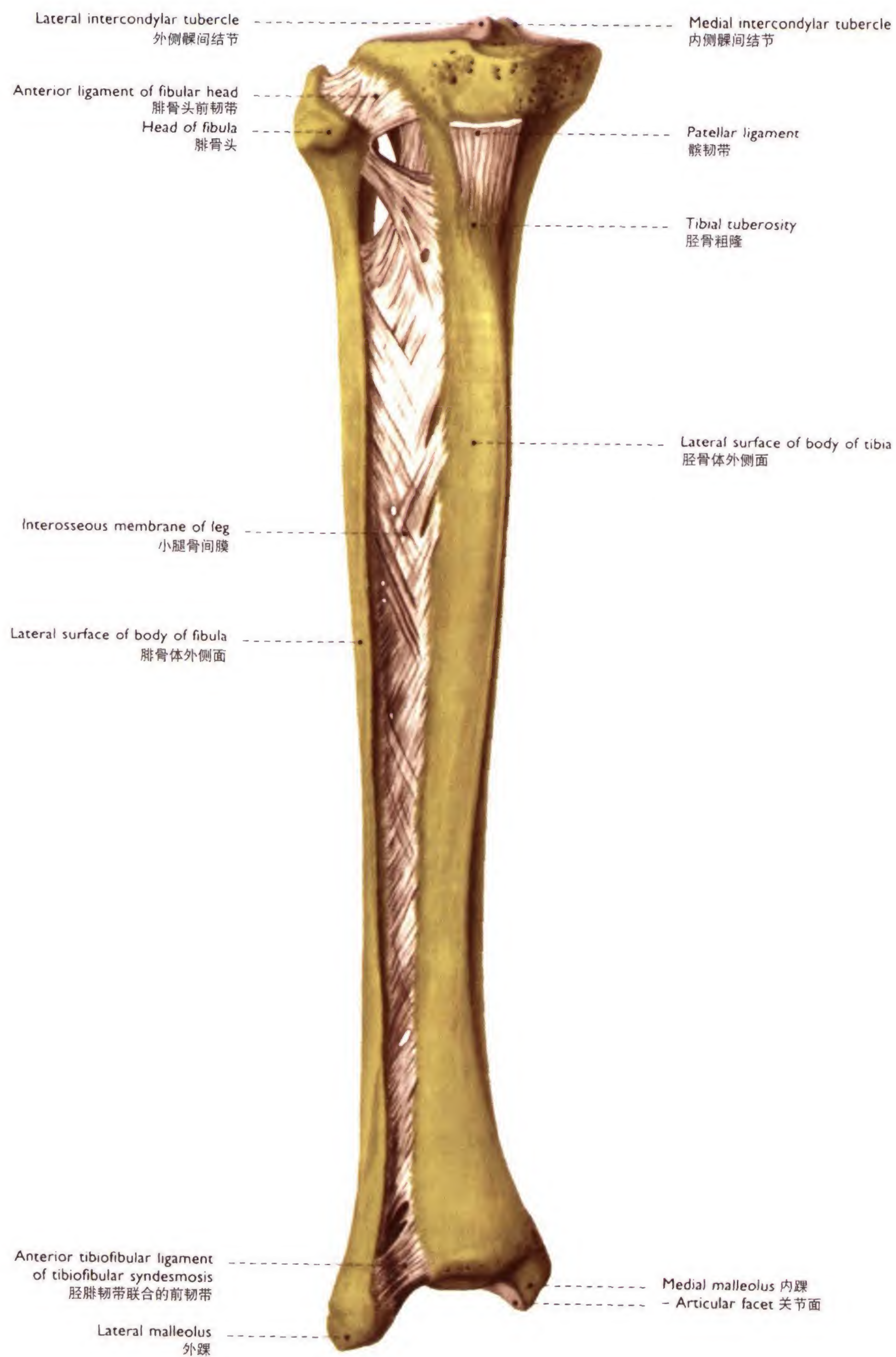
a, c, e Transverse magnetic resonance images (MRI, T₁-weighted) 横断面磁共振图像(MRI, T₁加权)

b, d, f Transverse anatomical sections
through 解剖横断面分别经

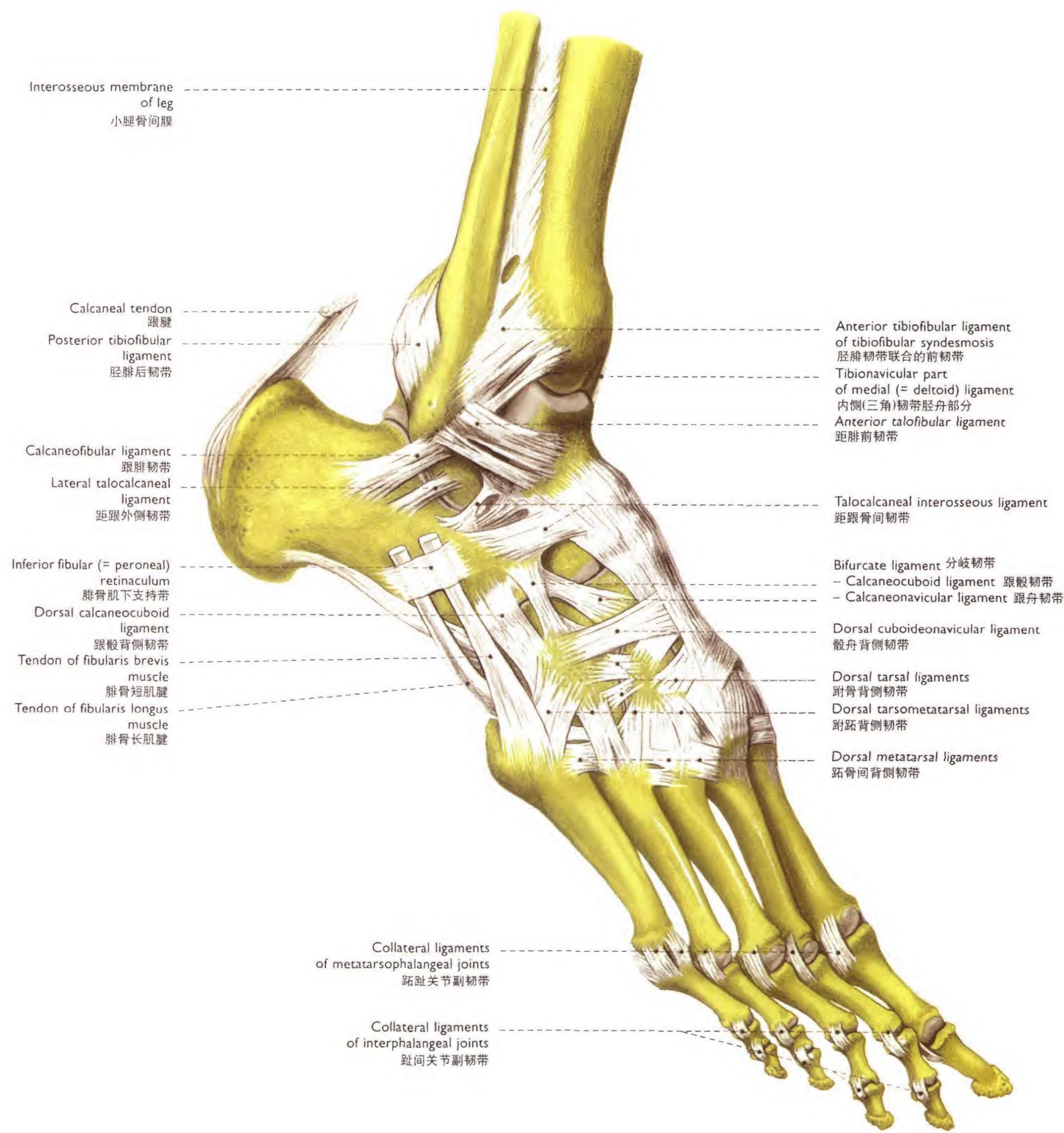
a, b cranial parts 上部

c, d middle parts 中部

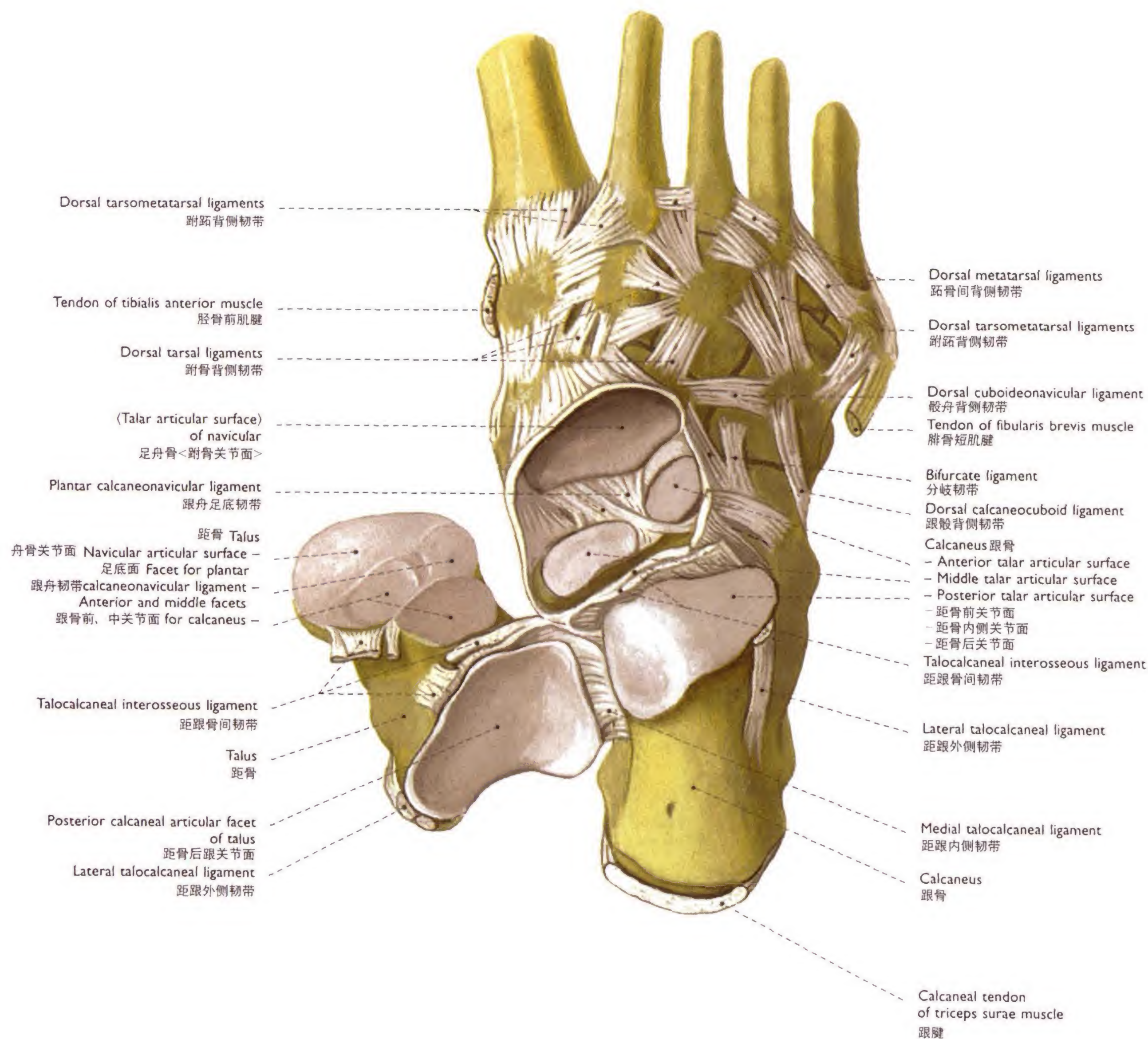
e, f caudal parts
of the knee joint 膝关节下部



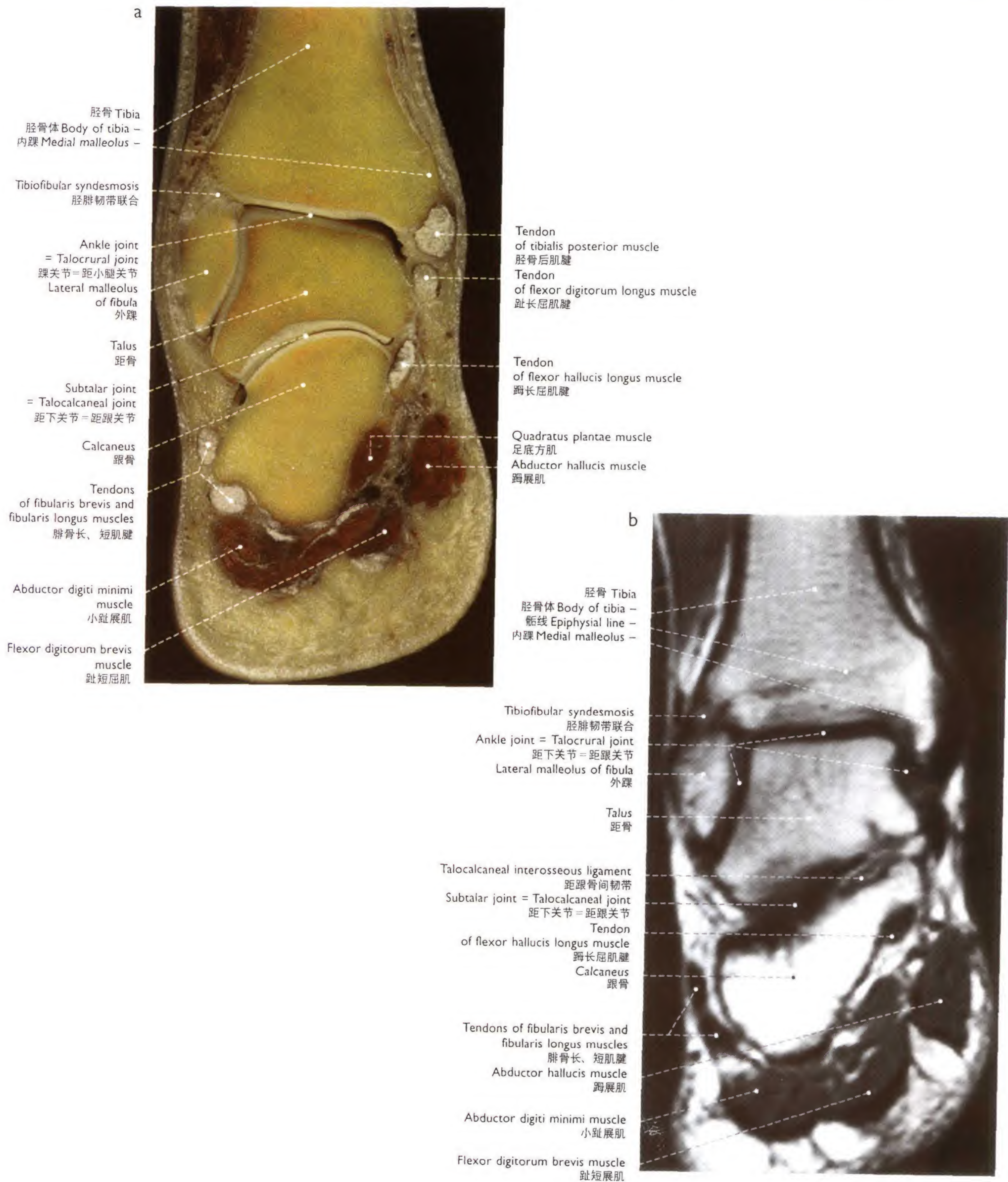
205 Tibiofibular joints and syndesmoses
 of the right leg (50%) 右小腿胫腓关节和韧带
 Ventral aspect 前面观



206 Joints and ligaments of the right foot (70%) 右足关节和韧带
Lateral aspect 外侧面观



207 Subtalar (= talocalcaneal), talocalcaneonavicular, and tarsometatarsal joint of the right foot (90%) 右足距下(距跟)关节、距跟舟关节和跗跖关节
The talus was turned medially. Dorsal aspect 距骨翻向内侧，背侧面观



208 Bones, joints, and ligaments of the right foot (80%) 右足骨、关节和韧带
Coronal sections, distal aspect 冠状断面下面观
a Anatomical section 解剖断面
b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)



a

Body of fibula
腓骨体

Tibia 胫骨
- Body of tibia 胫骨体
- Medial malleolus 内踝

Ankle joint = Talocrural joint
踝关节 = 距小腿关节

Talus
距骨

Subtalar joint = Talocalcaneal joint
距下关节 = 距跟关节

Tarsal sinus
跗骨窦

Talocalcaneonavicular joint
距跟舟关节

Navicular
足舟骨

Calcaneus
跟骨

Cuboid
骰骨

Base
of 5th metatarsal bone
第5跖骨底

b

Body of tibia
胫骨体

Body of fibula
腓骨体

Tibiofibular syndesmosis
胫腓韧带联合

Ankle joint
= Talocrural joint
踝关节 = 距小腿关节

Talus
距骨

Talocalcaneonavicular joint
(Talonavicular portion)
距跟舟关节(距舟部分)

Navicular
足舟骨

Cuneiform bones
楔骨

Metatarsals
跖骨

Calcaneus
跟骨

Subtalar joint = Talocalcaneal joint
距下关节 = 距跟关节

Tarsal sinus
跗骨窦

Cuboid
骰骨

Base of 5th metatarsal bone
第5跖骨底

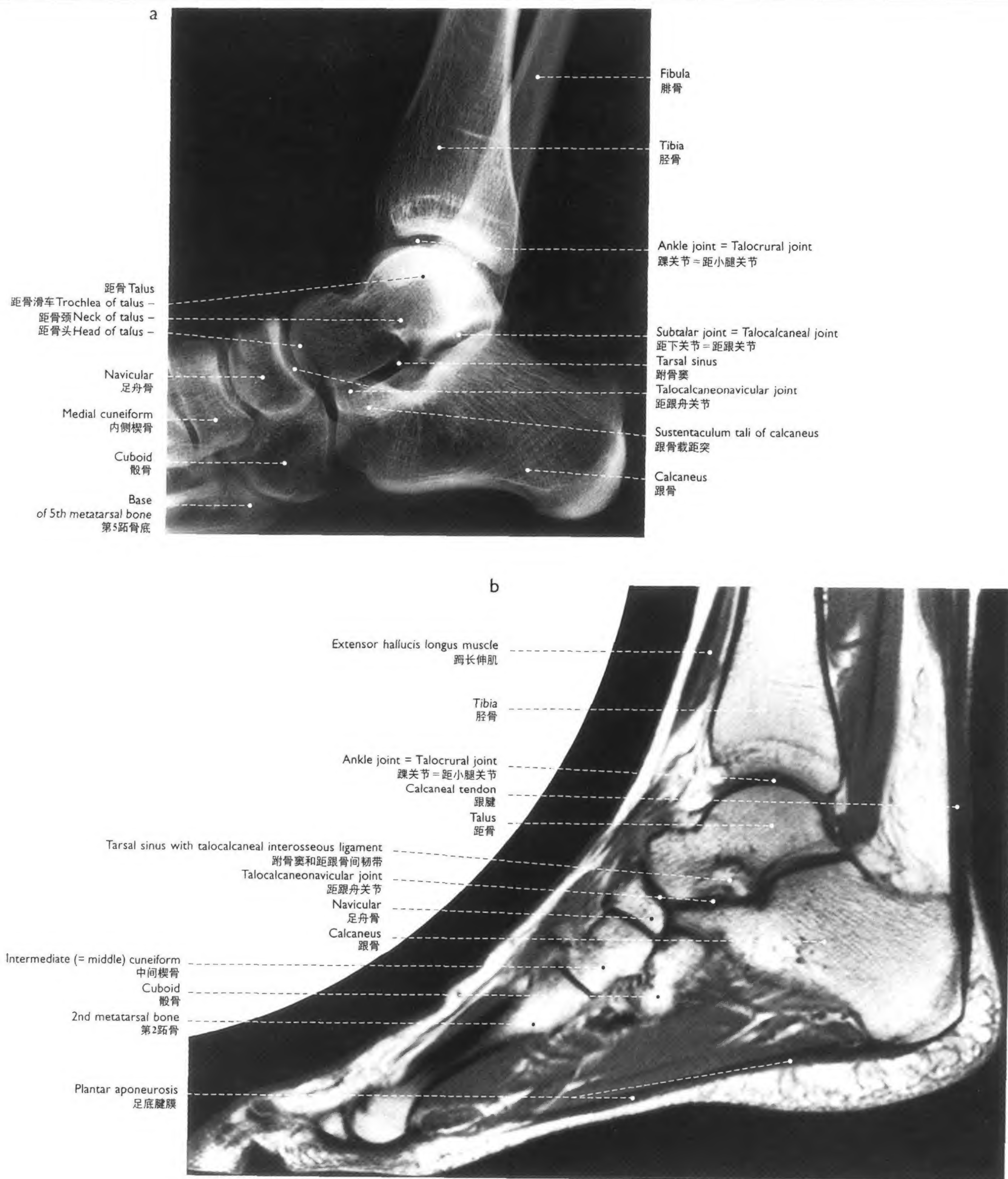
209 Bones and joints of the right foot (75%) 右足骨和关节

Oblique laterodistal view 后外侧斜位观

a Radiograph showing the ankle (= talocrural),
subtalar (= talocalcaneal), and talocalcaneonavicular joints

as well as the tarsal sinus X线片显示踝关节(距小腿关节)、距下关节(距跟关节)和距跟舟关节以及跗骨窦

b Corresponding anatomical representation 相应的解剖标本

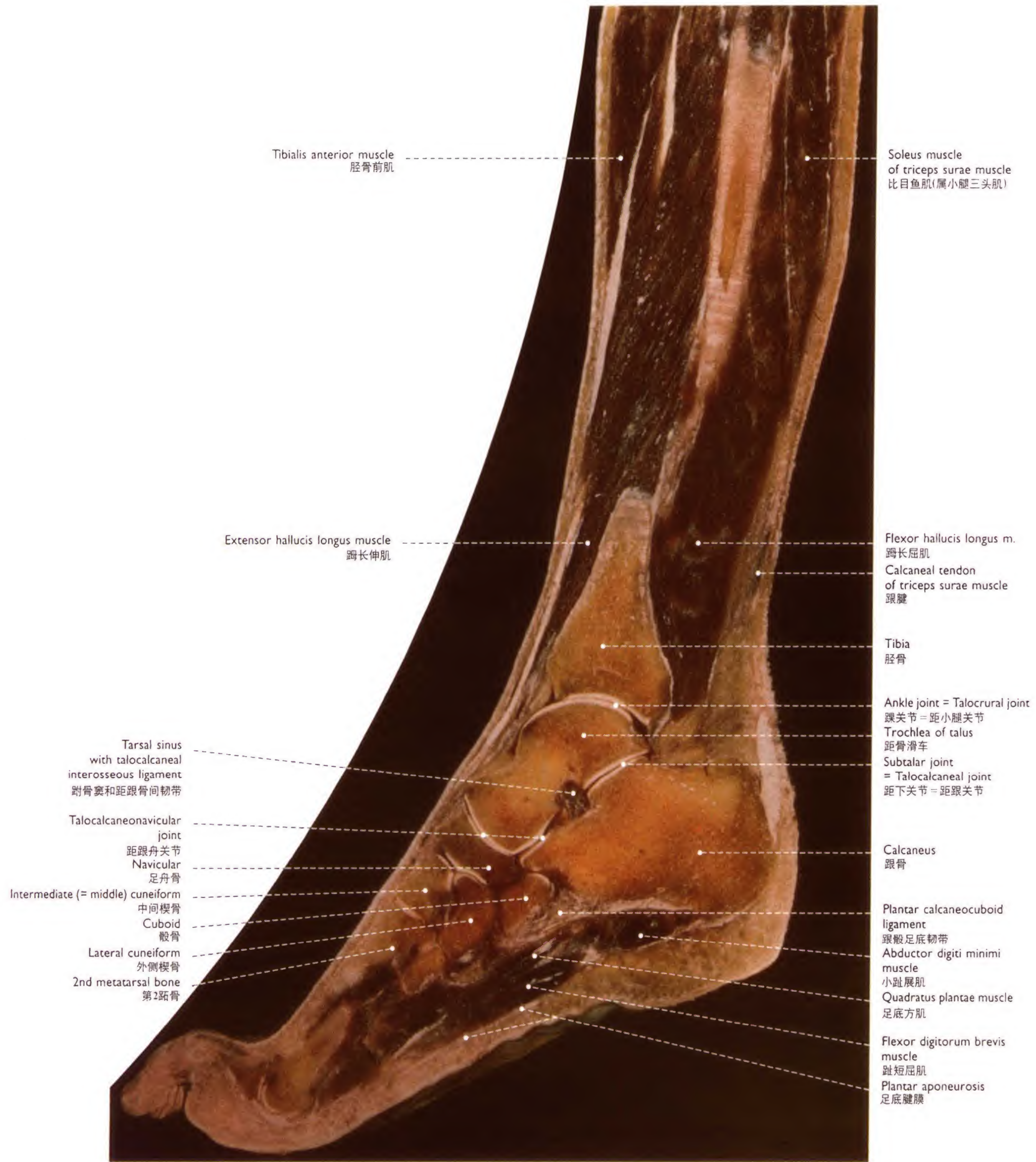


210 Bones and joints of the right foot (70%) 右足骨和关节

a Mediolateral radiograph 内外位X线图像

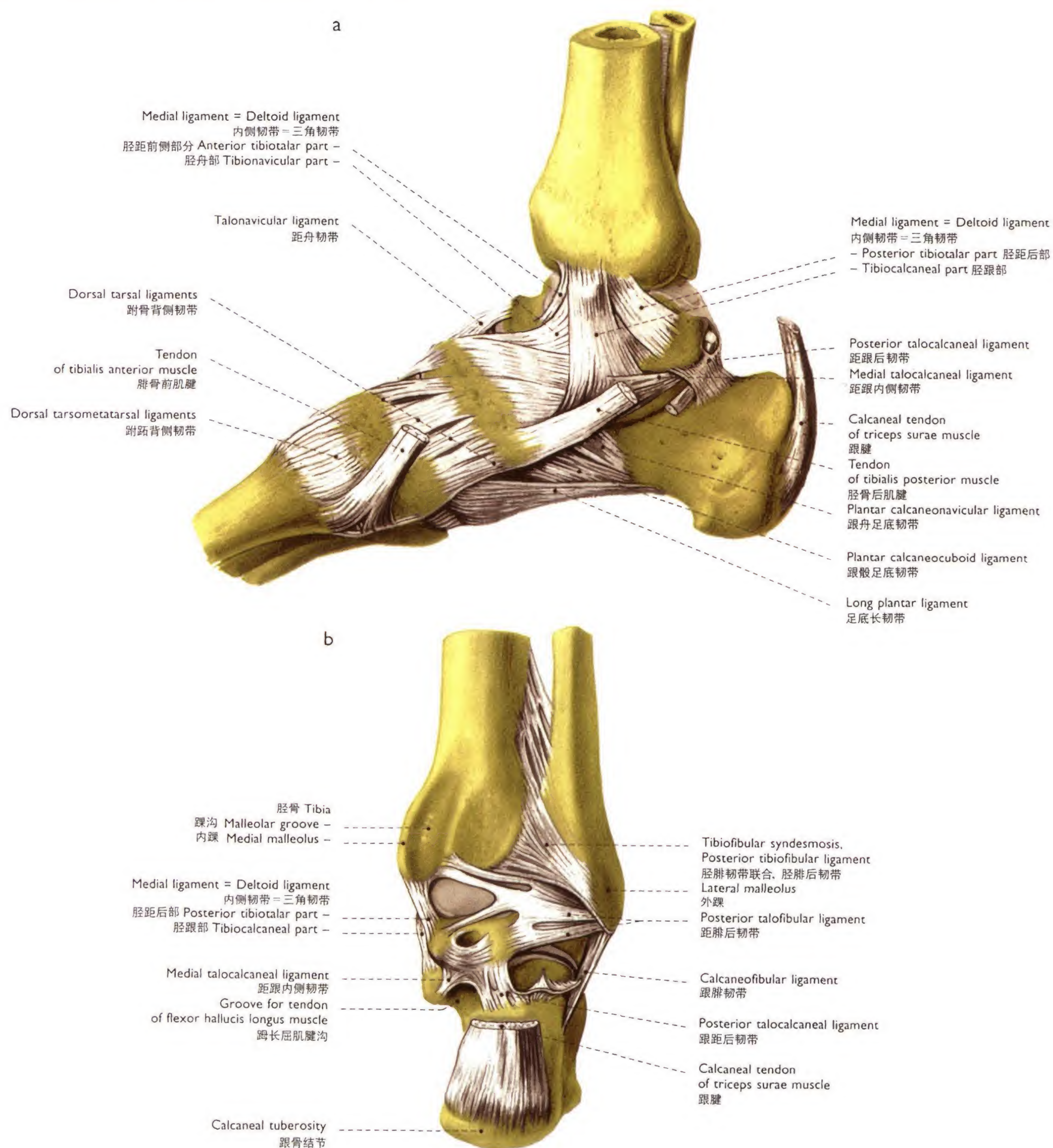
b Sagittal magnetic resonance image (MRI, T₁-weighted)

经右足中部骨矢状位磁共振图
through the medial part of the bones of the right foot, medial aspect 像(MRI, T₁加权), 内侧面观



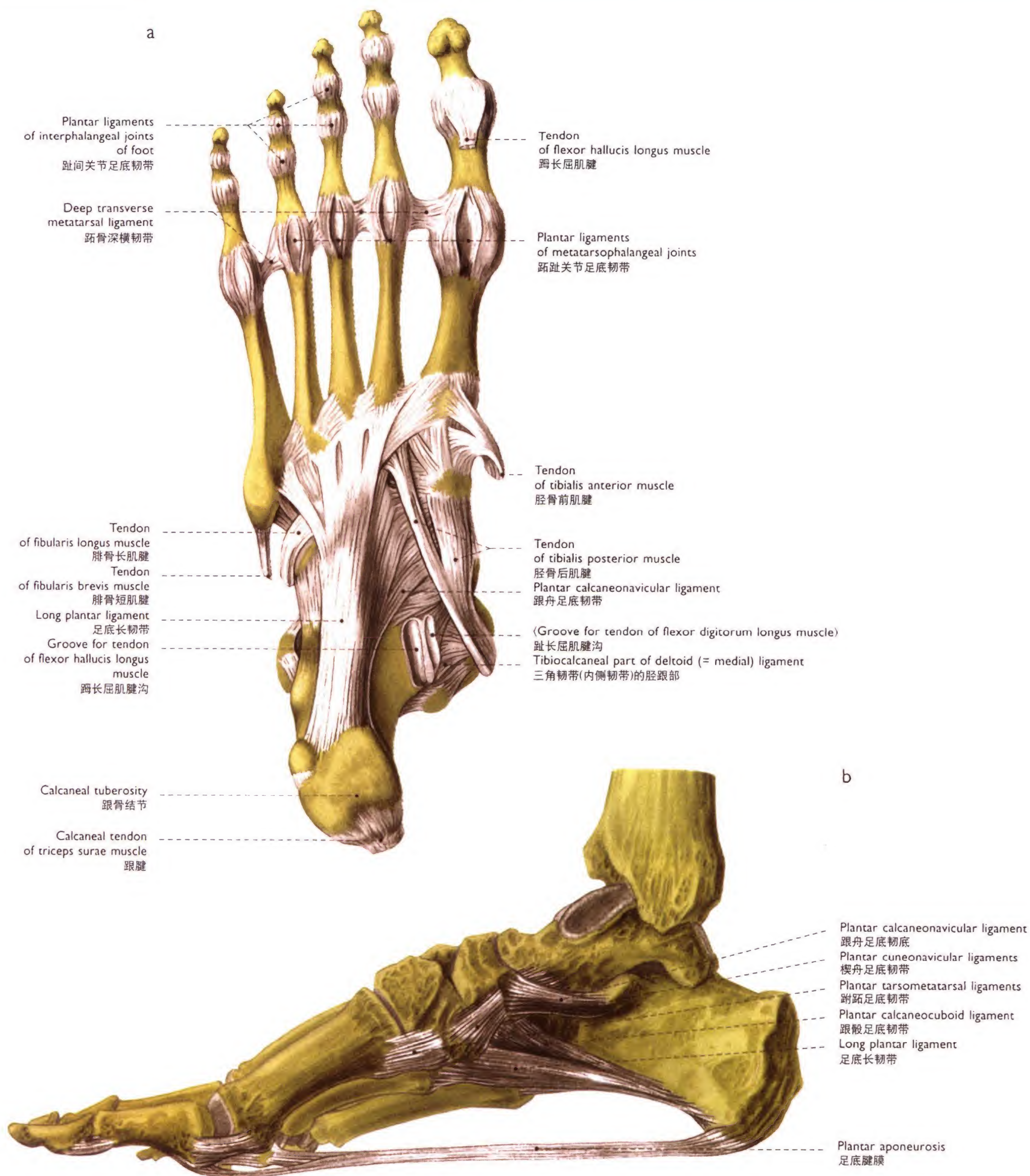
211 Bones and joints of the right foot (60%) 右足骨关节

Sagittal anatomical section through the medial part of the bones of the right foot, medial aspect 经右足内侧部骨矢状位解剖断面，内侧面观



212 Joints and ligaments of the right foot (60%) 右足关节和韧带

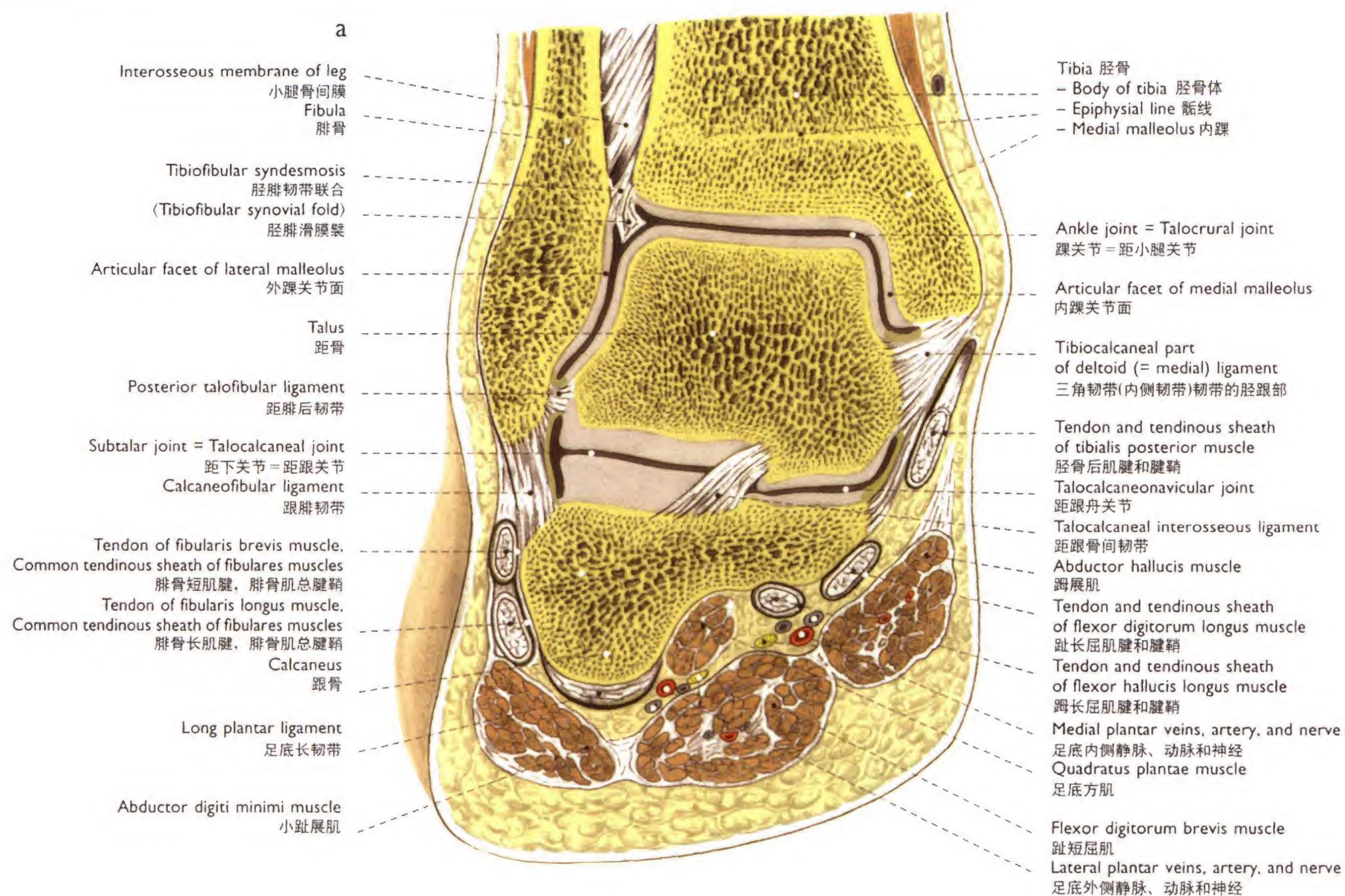
a Medial aspect 内侧面观
b Dorsal aspect 后面观



213 Joints and ligaments of the right foot (60%) 右足关节和韧带

a Plantar aspect 下面观

b Ligaments stabilizing the subtalar (= talocalcaneal) 稳定距下关节(距跟关节)和距跟舟关节的韧带, medial aspect 跟舟关节的韧带, 内侧面观

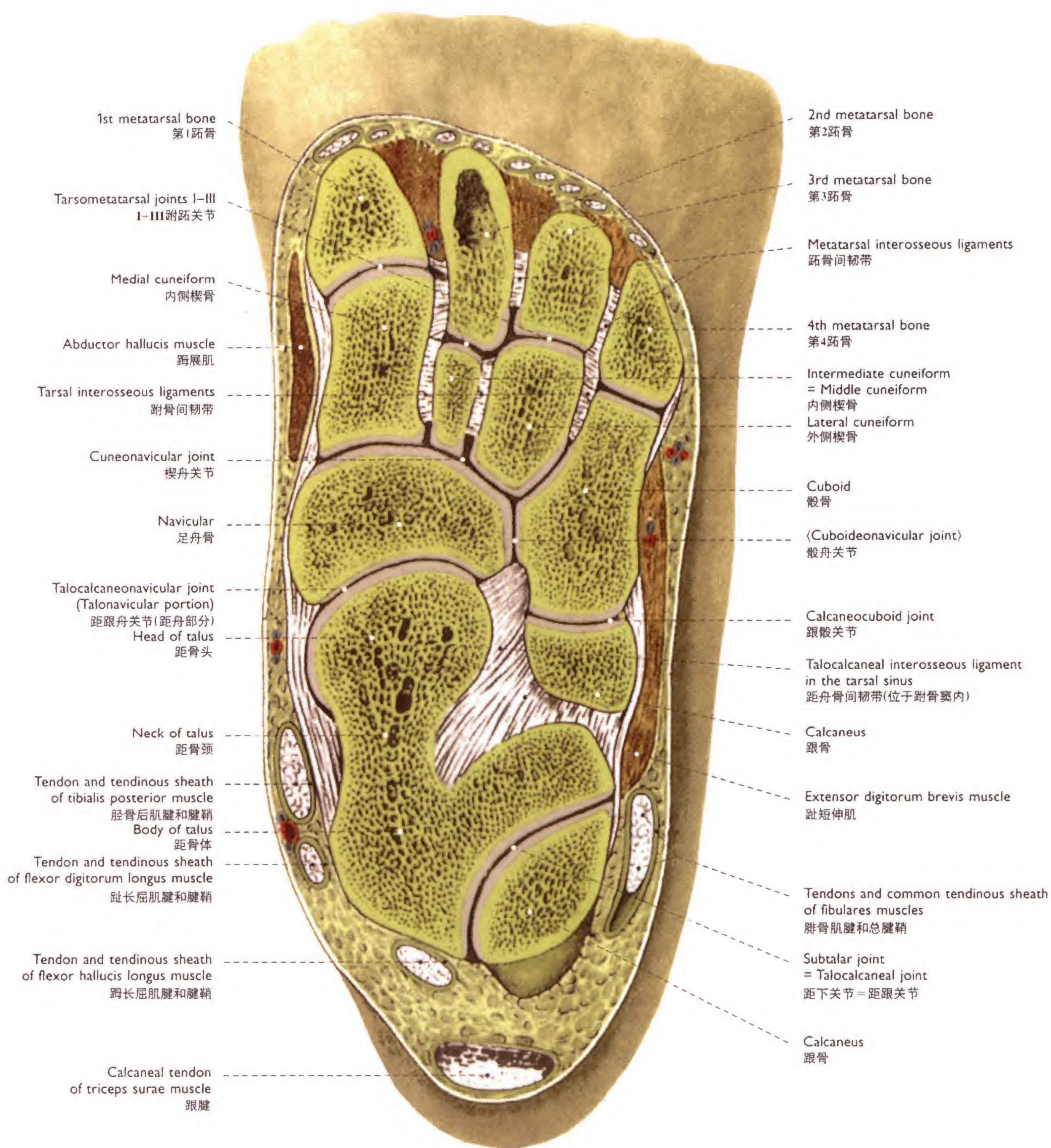


214 Ankle (= talocrural), subtalar, and talocalcaneonavicular joints of the right foot (100%) 右足踝关节(距小腿关节)、距下关节和距跟舟关节

Coronal sections, distal aspect 冠状位断面、前面观

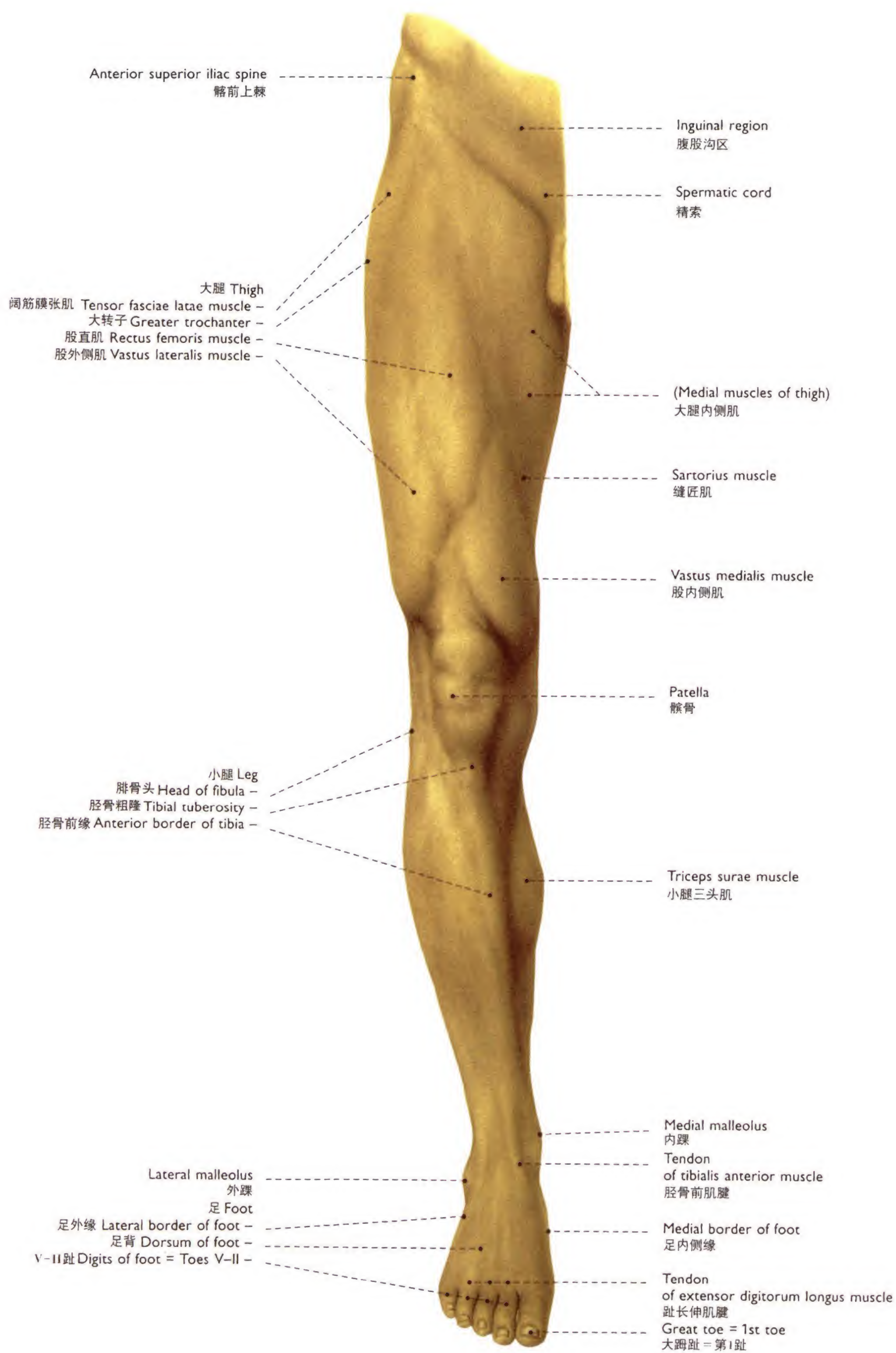
a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₂-weighted) 磁共振图像(MRI, T₂加权)

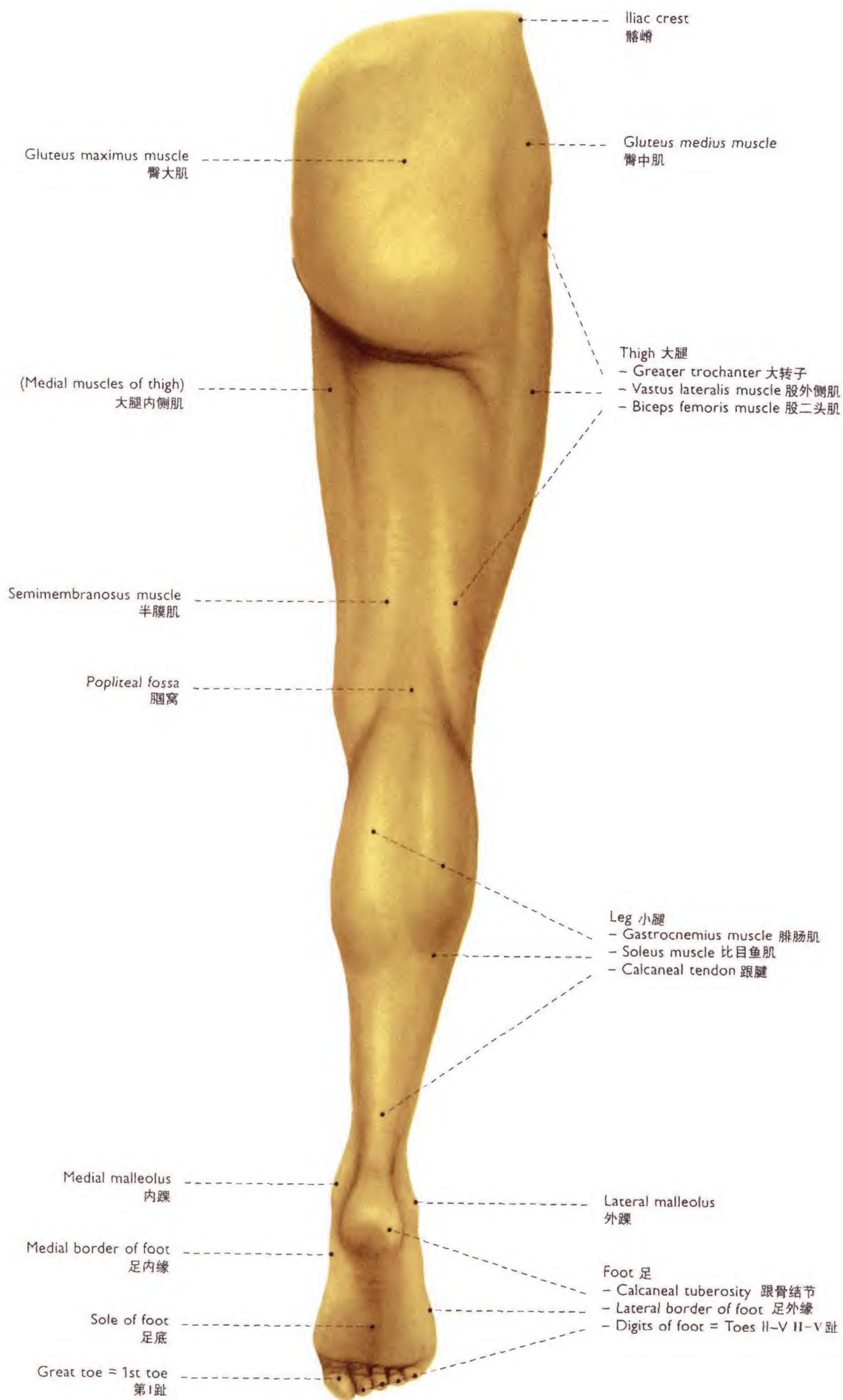


215 Joints of the right foot (100%) 右足关节

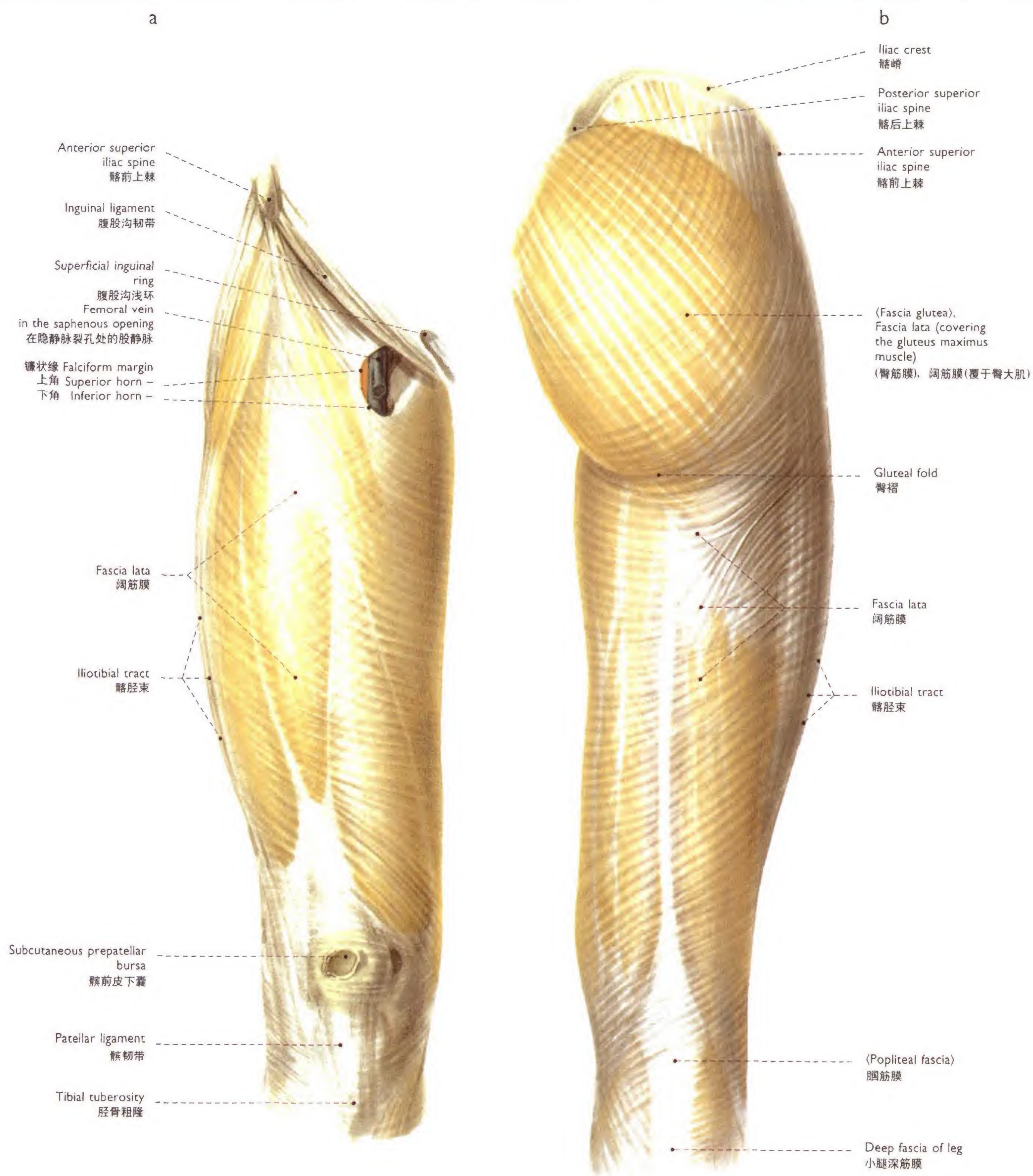
Horizontal section through the right foot,
proximal aspect of the plantar part 经右足水平断面、足底部上面观



216 Surface anatomy of the right lower limb (20%) 右下肢表面解剖面
Ventral aspect 前面观

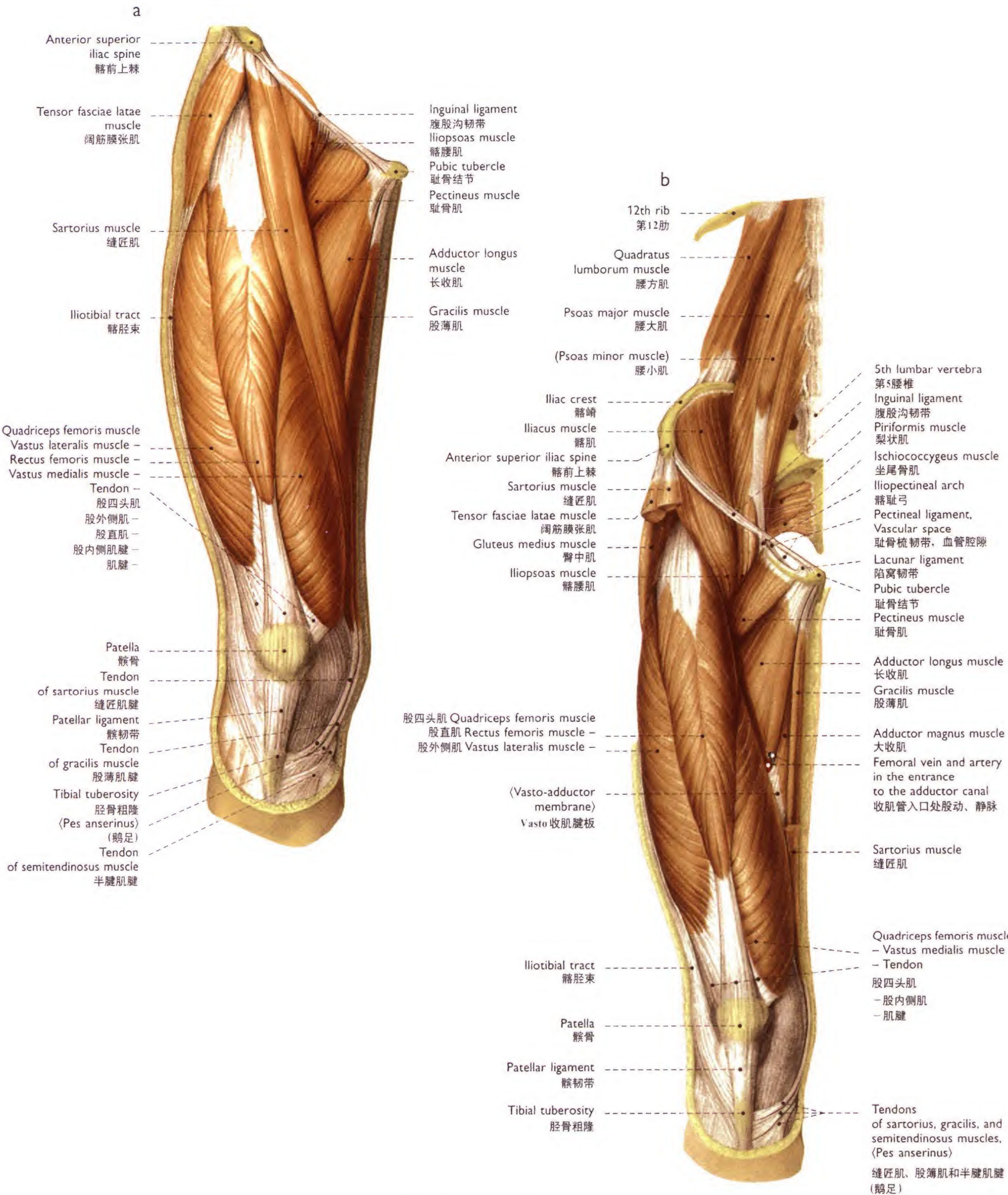


217 Surface anatomy of the right lower limb (20%) 右下肢表面解剖
Dorsal aspect 后面观



218 Fascia lata of the right thigh (30%) 右股阔筋膜

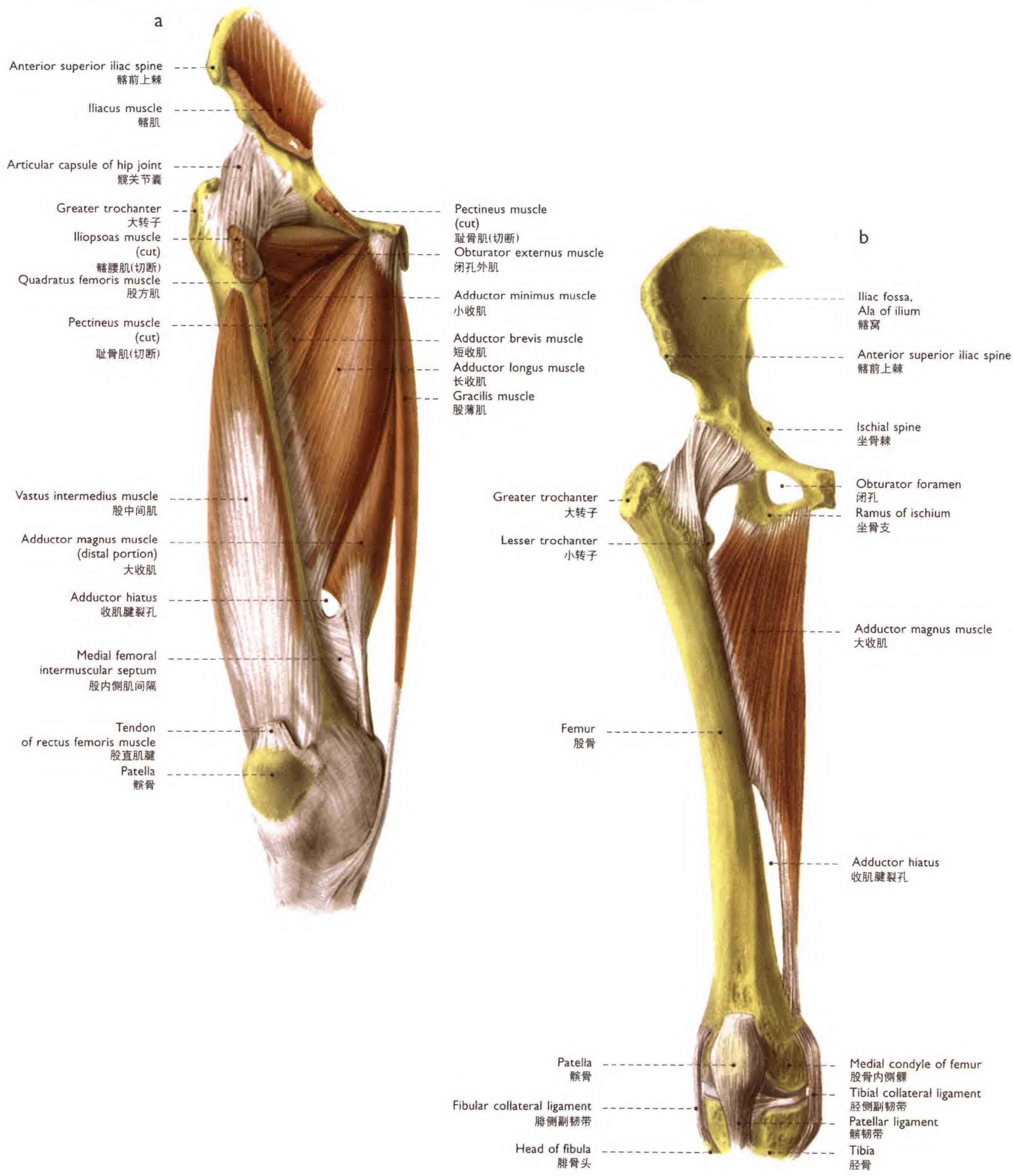
- a The cribriform fascia in the saphenous opening was removed. Ventral aspect 隐静脉裂孔处筛筋膜被移去、前面观
- b Dorsal aspect 后面观



219 Muscles of the right thigh (25%) 右大腿肌

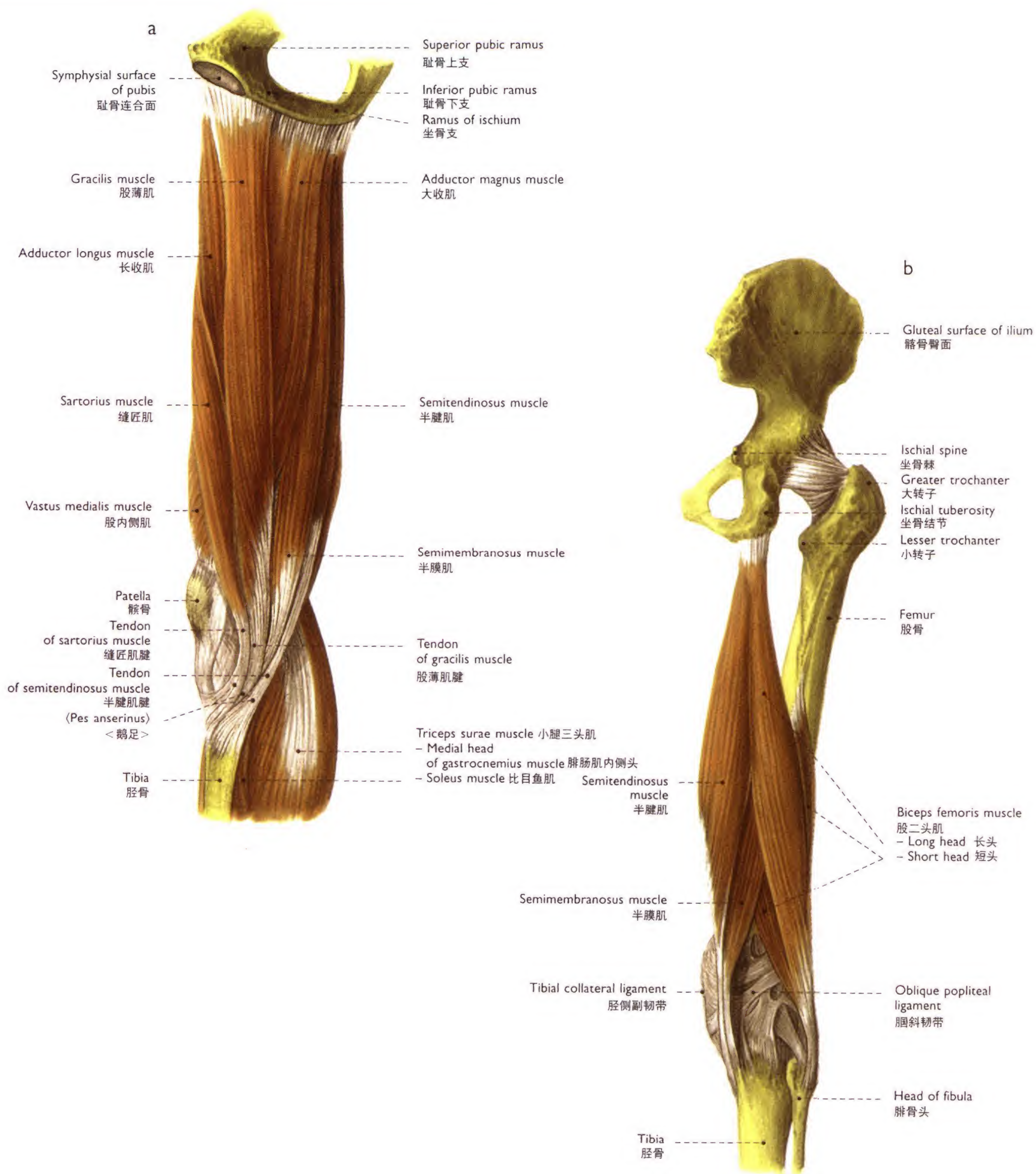
Ventral aspect 前面观

- a Anterior muscles of thigh 股前群肌
b The sartorius and tensor fasciae latae muscles were partially removed. Some muscles of the pelvis are additionally shown. 缝匠肌、阔筋膜张肌被部分切除，显示部分盆部肌。



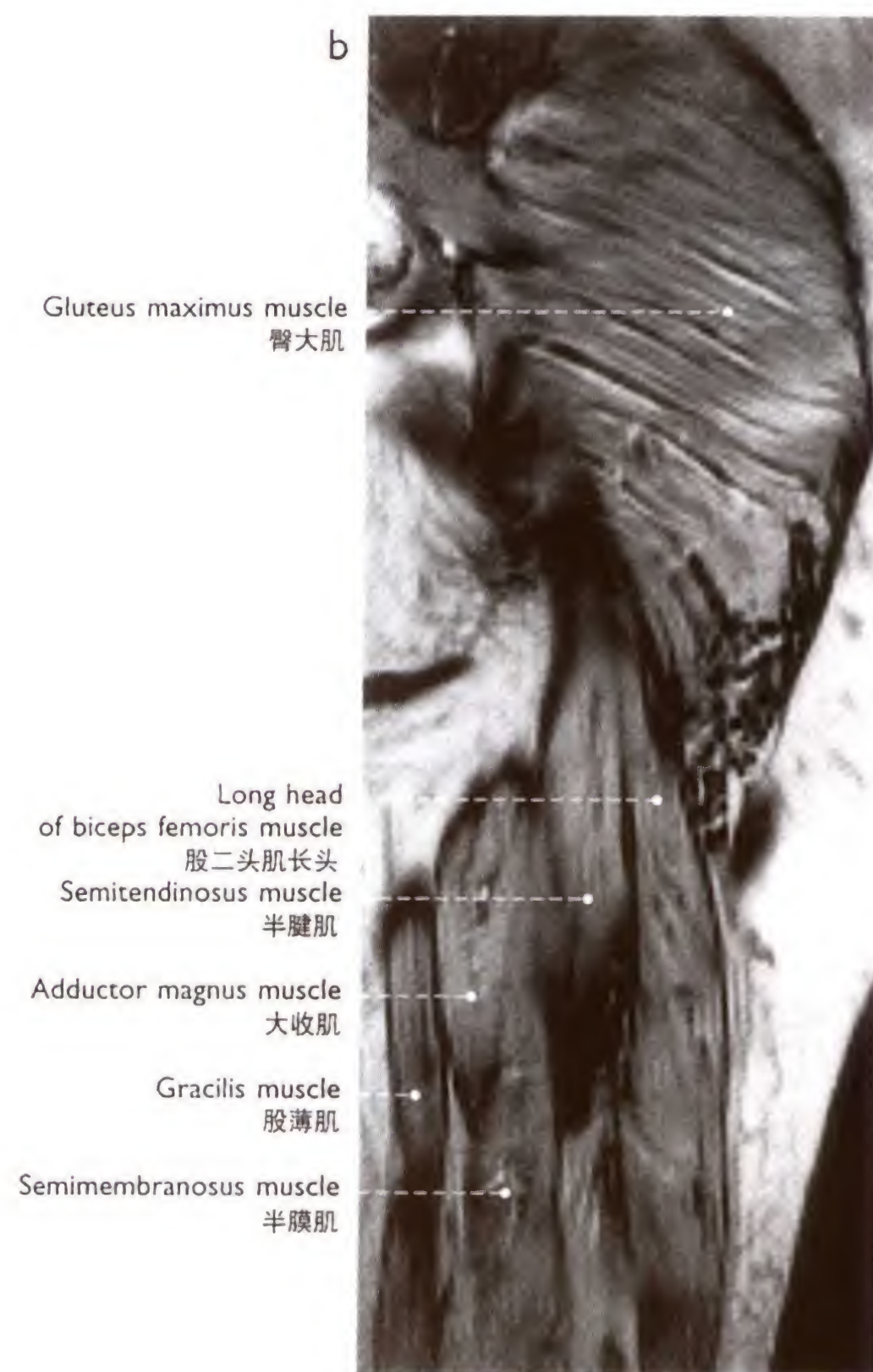
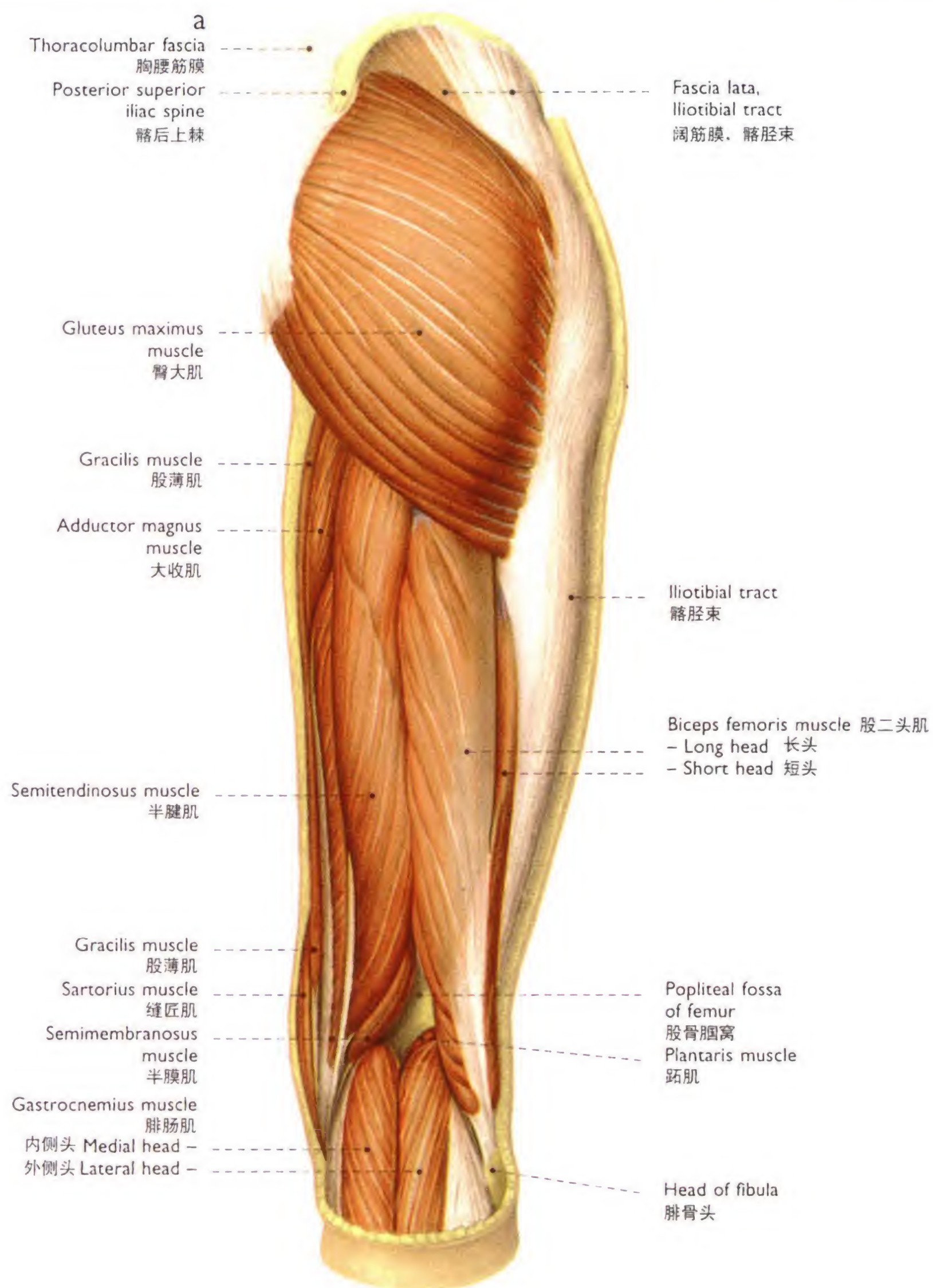
220 Muscles of the right thigh (25%) 右大腿肌

- Ventral aspect 前面观
- a Medial muscles (adductors) of thigh
and deep part of the quadriceps femoris muscle 股内侧群肌和肌四头肌深部
- b Adductor magnus muscle 大收肌



221 Muscles of the right thigh (25%) 右大腿肌

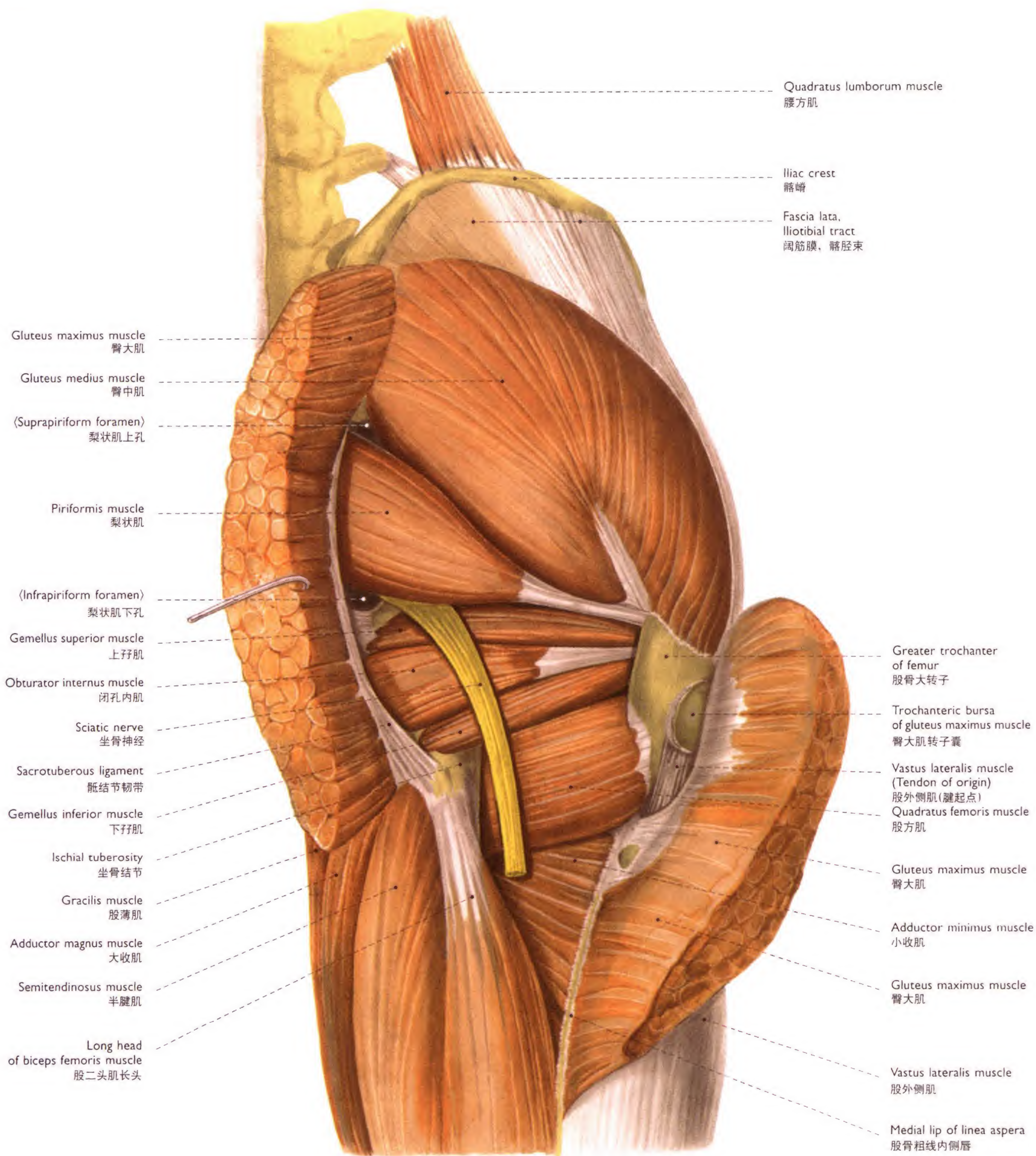
- a Medial muscles (adductors) of thigh, medial aspect 股内侧群肌, 内侧面观
- b Posterior muscles of thigh ('hamstrings'), dorsal aspect 股后群肌(腓绳肌), 后面观



222 Muscles of the right thigh and superficial layer of the muscles of the hip 右大腿肌、髋肌浅层

a Dorsal aspect (20%) 后面观

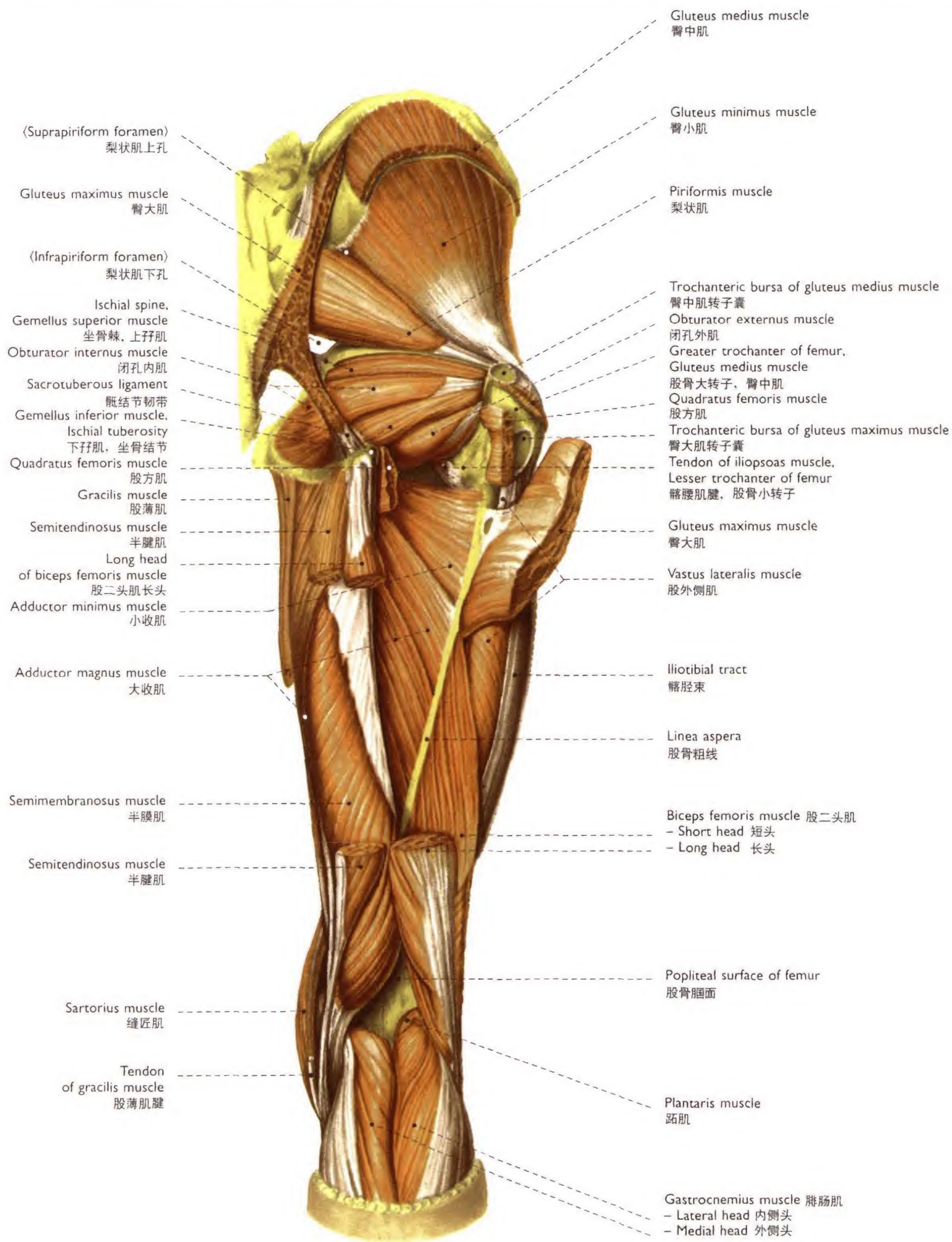
b Coronal magnetic resonance image (MRI, T₁-weighted) 冠状位磁共振图像(MRI, T₁加权)



223 Muscles of the right hip (50%) 右髋肌

Deep layer. The gluteus maximus muscle was divided.

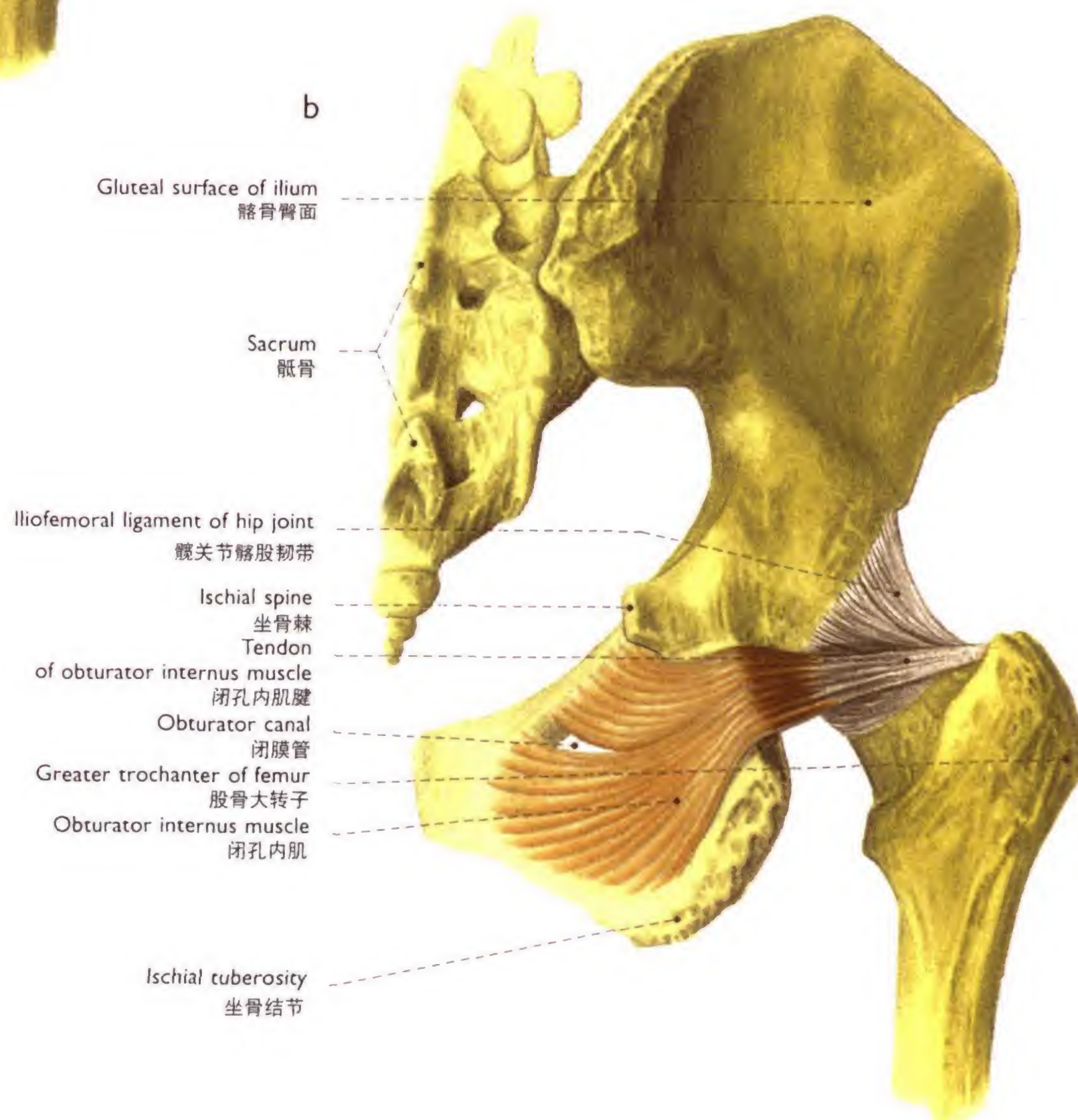
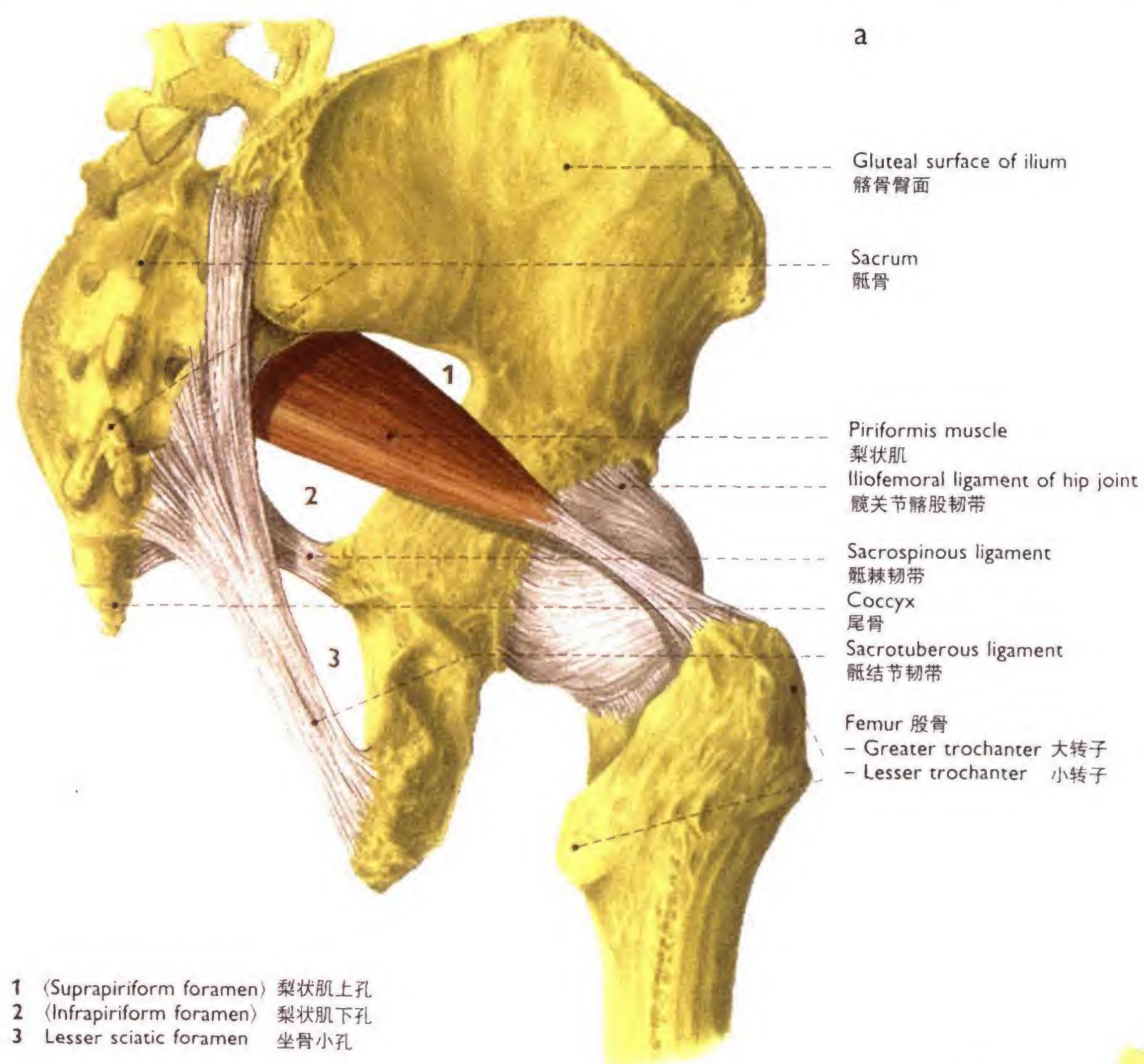
Dorsal aspect 深层, 臀大肌被分离。后面观



224 Muscles of the right thigh and hip (30%) 右大腿和髋肌

Deep muscular layer. The superficial muscles were partially removed.

Dorsal aspect 深层肌, 浅层肌被部分切除, 后面观

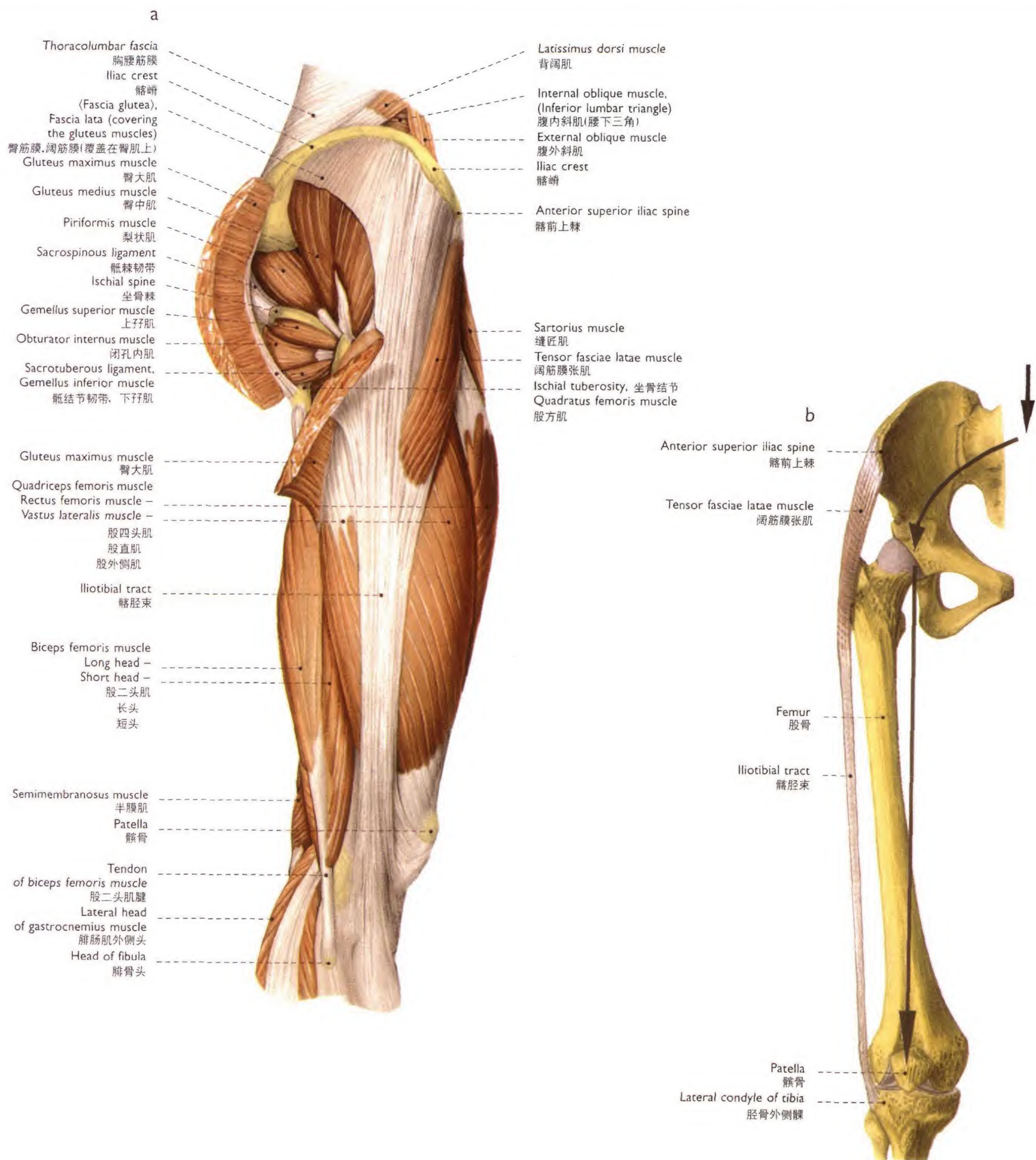


225 Muscles of the right hip (40%) 右髋肌

Dorsal aspect 后面观

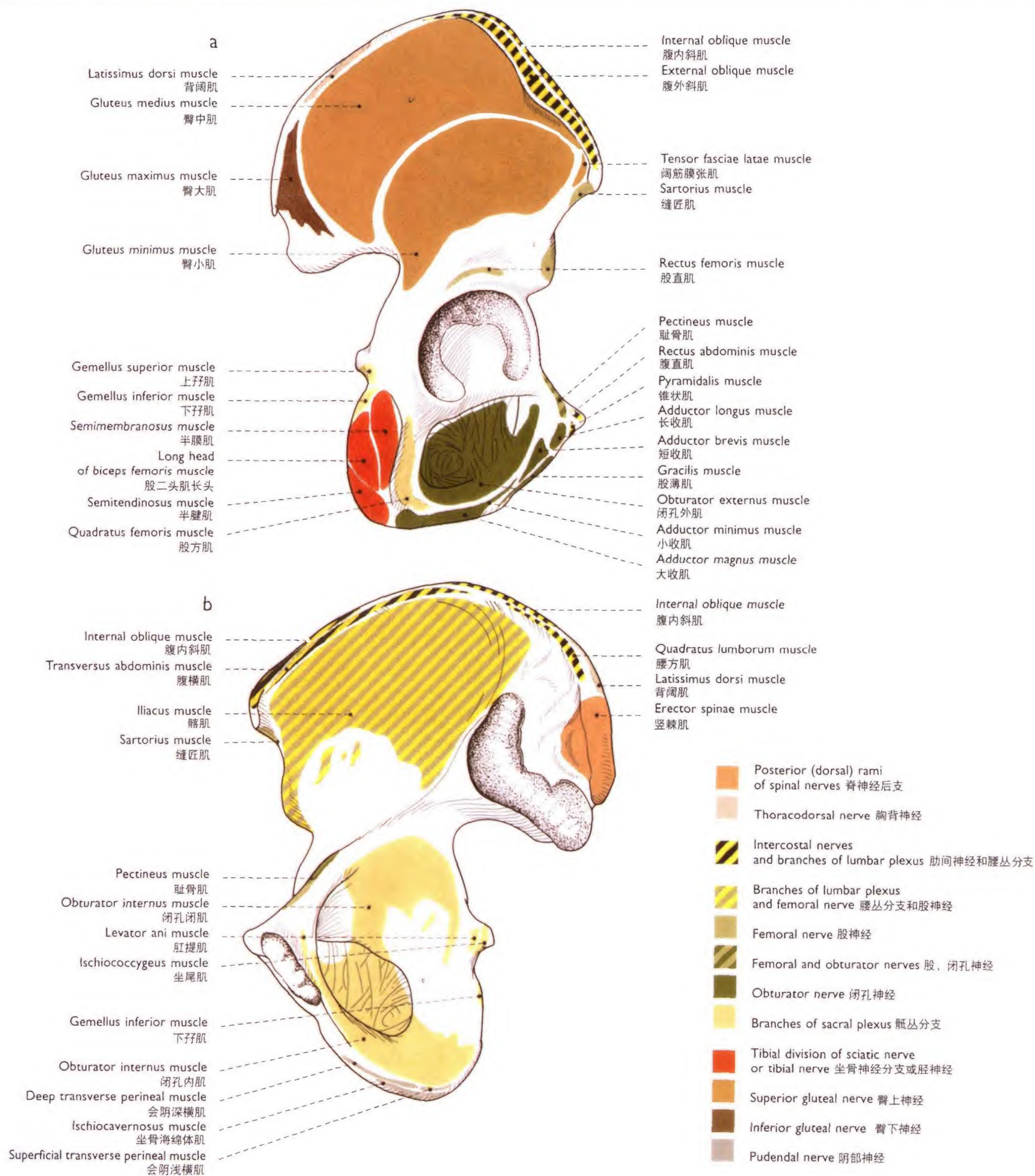
a Piriformis muscle 梨状肌

b Obturator internus muscle 闭孔内肌



226 Muscles of the right thigh and hip (20%) 右大腿肌, 髋肌

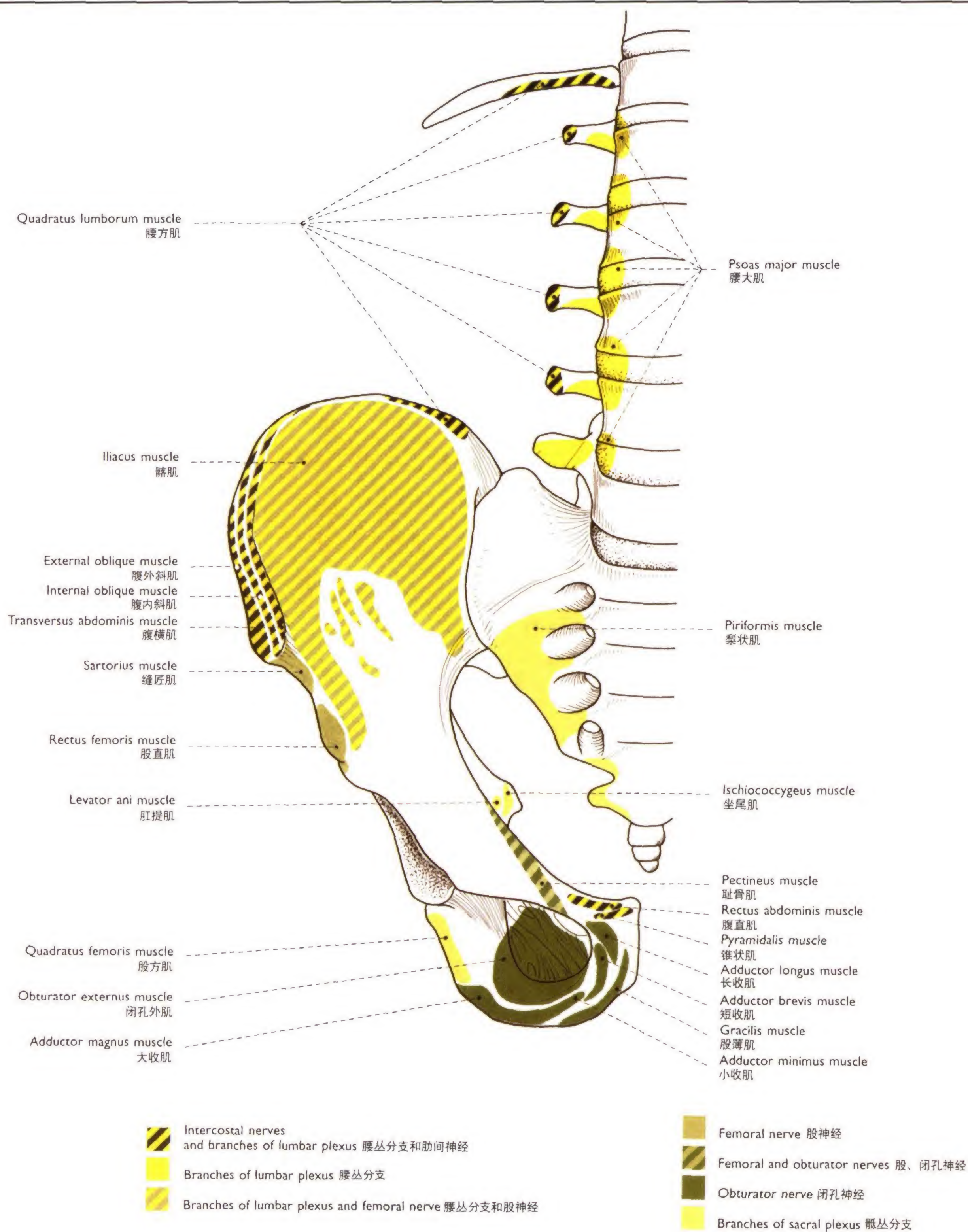
- a The gluteus maximus muscle was divided and turned up. Lateral aspect 臀大肌分离翻起, 后面观
b Tensor fasciae latae muscle and iliotibial tract, ventral aspect. 阔筋膜张肌和髂胫束, 前面观.
The arrow indicates the weight line in erect posture. 箭头表示直立姿势时的重力线



227 Muscle attachments to the right hip bone 右髋骨肌附着点

The colors indicate the innervation of the muscles attaching to the 彩色表示肌肉神经支配

- a outer surface 外面
b inner surface. 内面

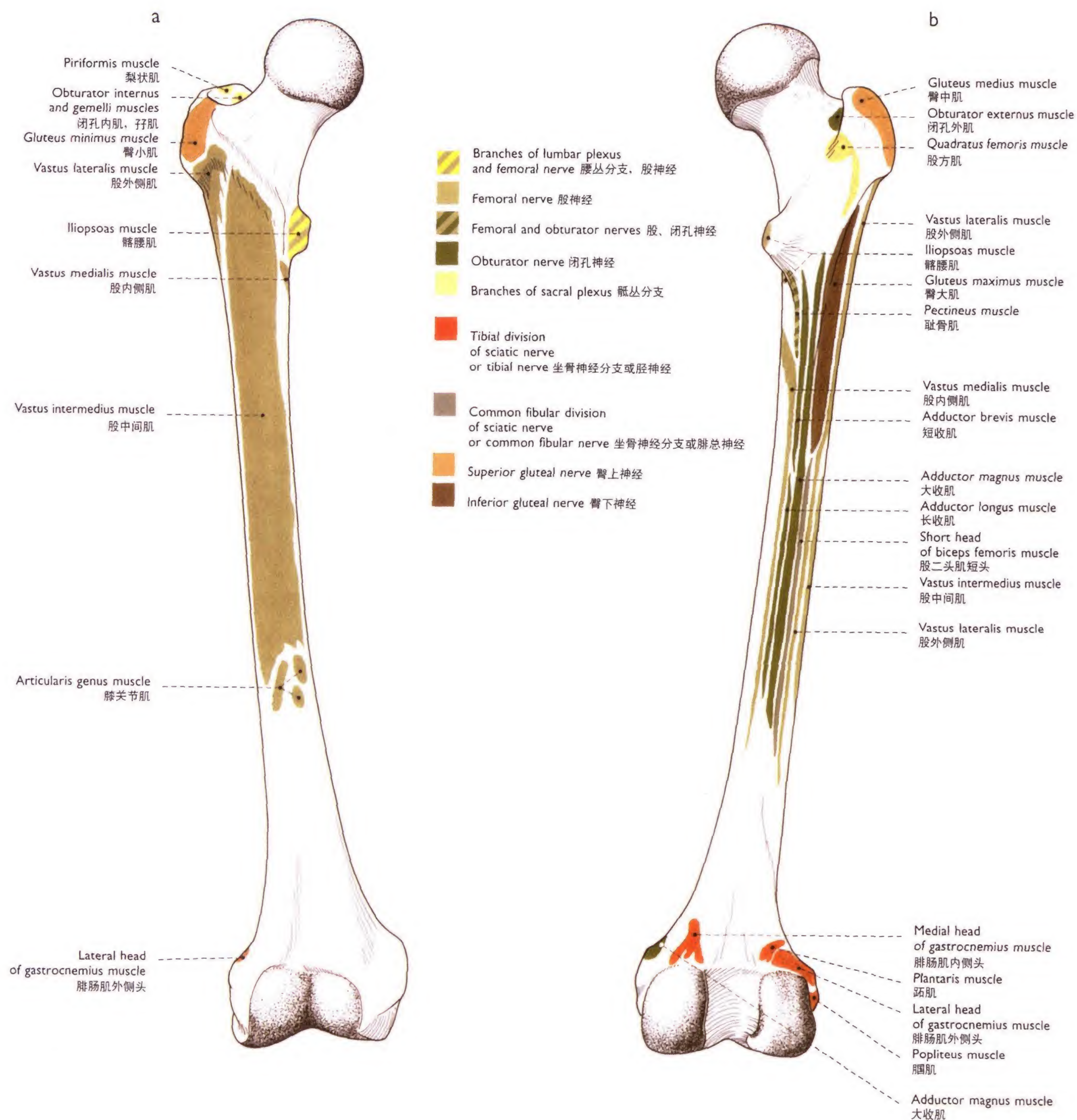


228 Muscle attachments to the lumbar spine

and the pelvic girdle on the right side 右侧骨盆和腰椎的肌肉附着点

The colors indicate the innervation. 彩色表示神经支配

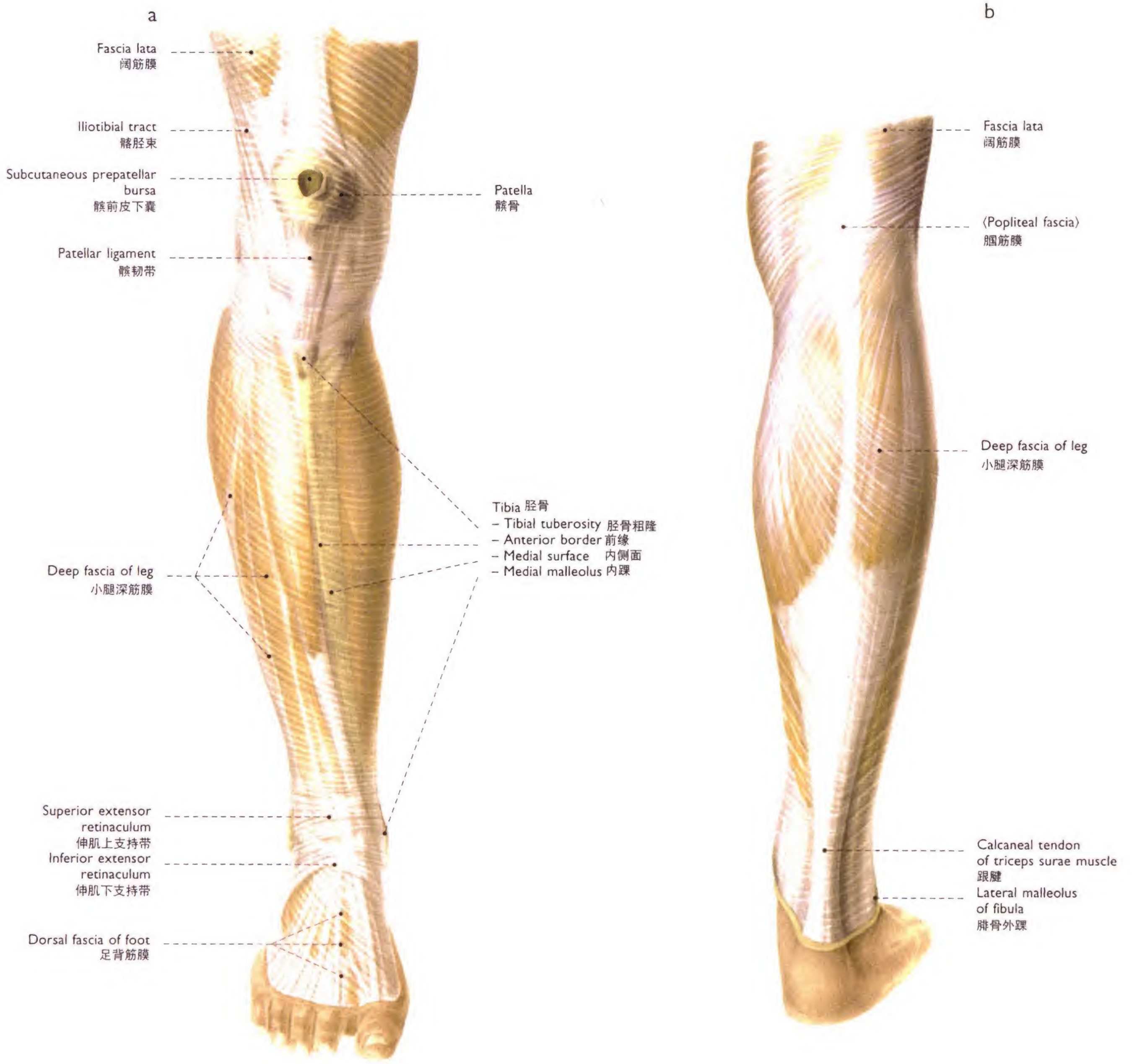
Ventral aspect 前面观



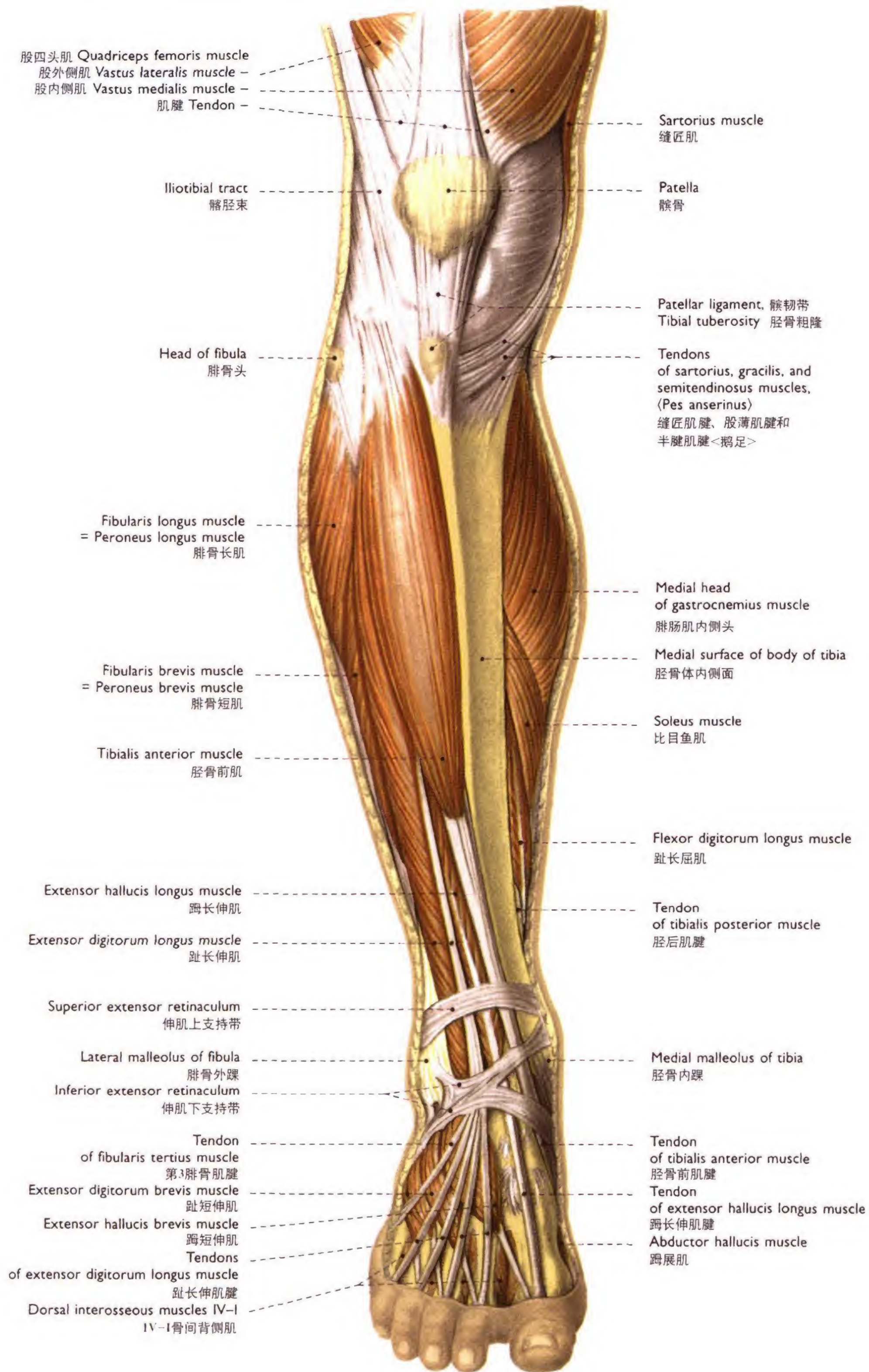
229 Muscle attachments to the right thigh bone (= femur) 右股骨肌附着点

The colors indicate the innervation of the muscles 彩色表示肌肉神经支配

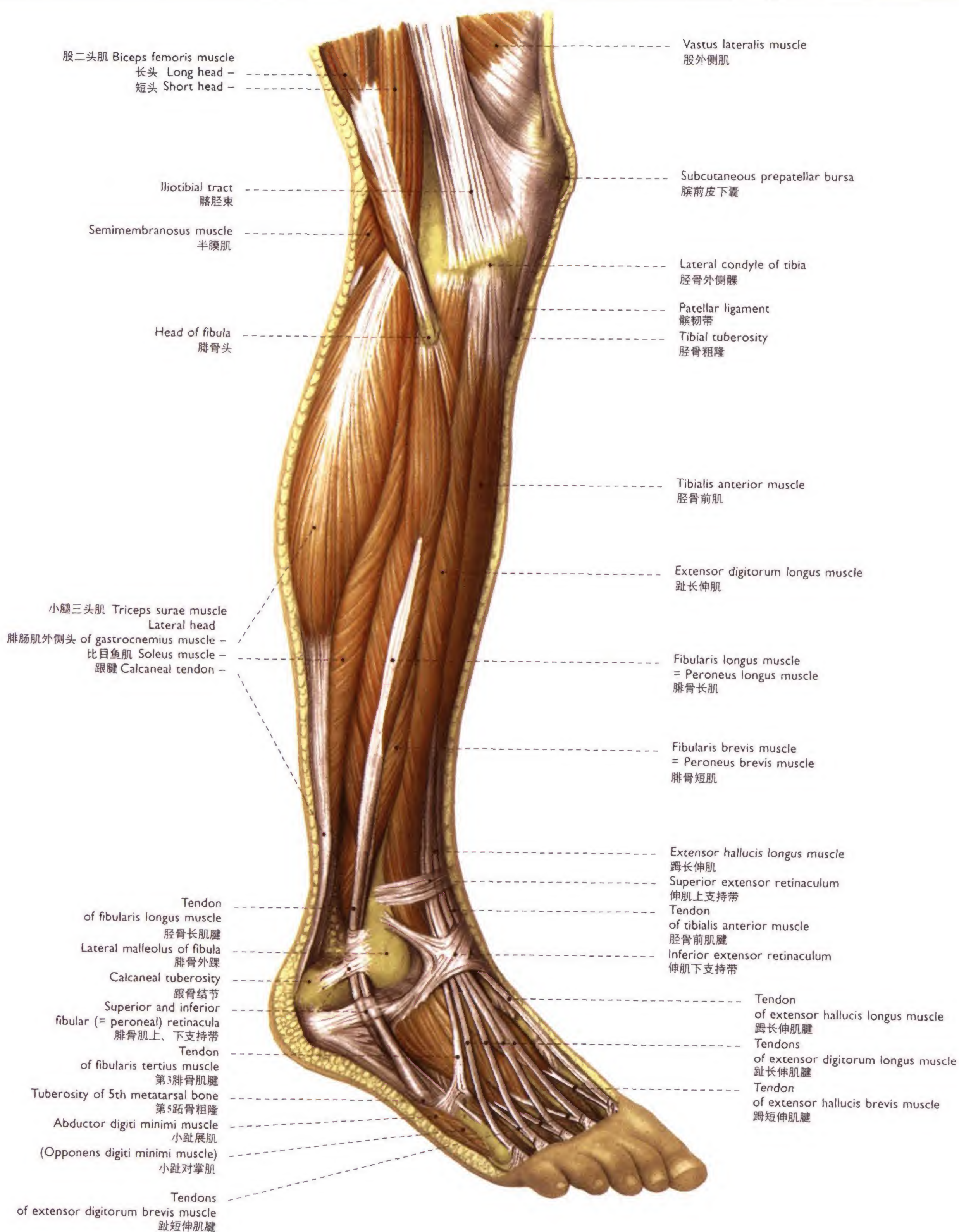
- a ventral surface 前面
 b dorsal surface 后面



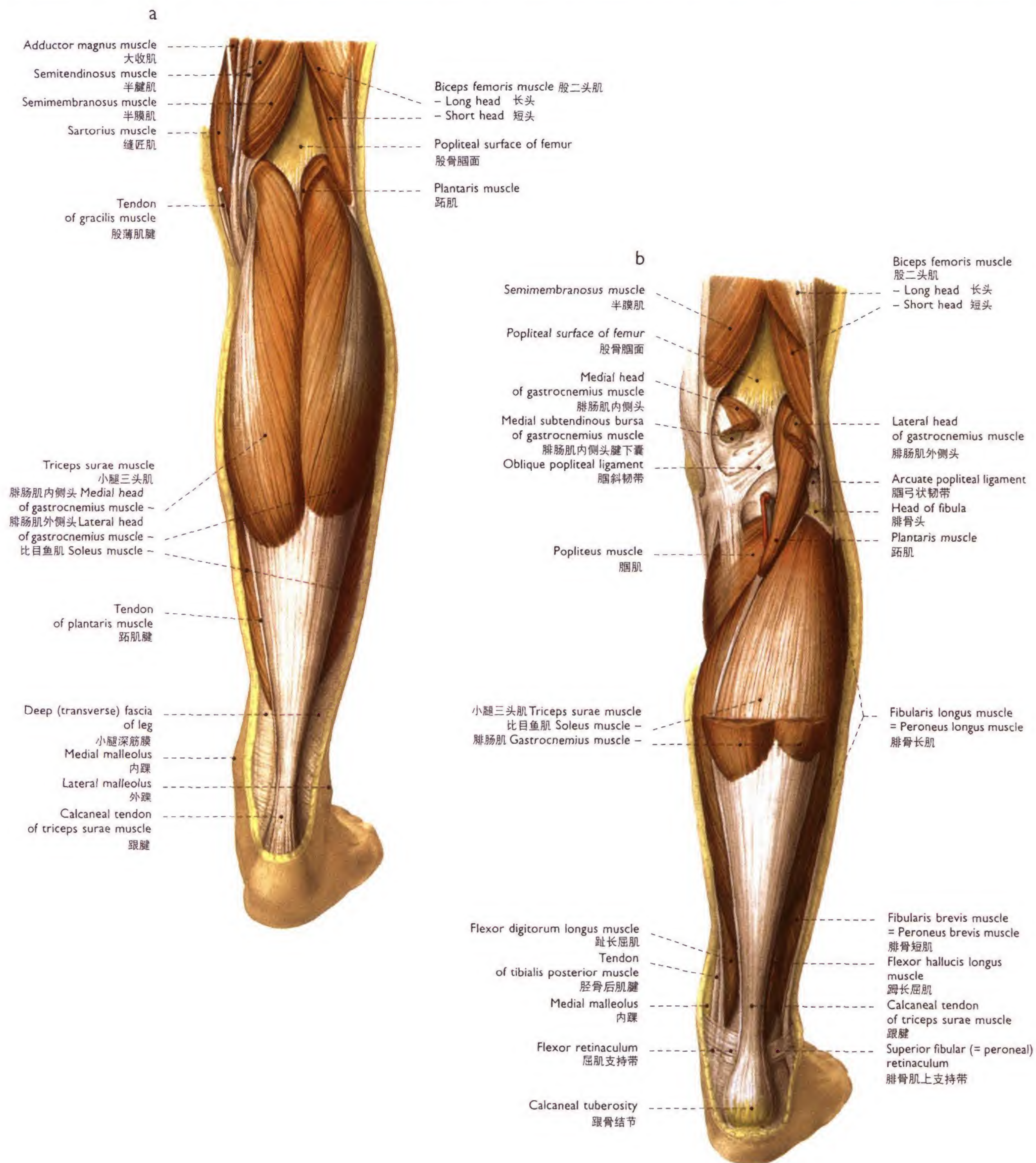
230 Fasciae of the right leg and the dorsum of foot (25%) 右小腿和足背筋膜
a Ventral aspect 前面观
b Dorsal aspect 后面观



231 Muscles of the right leg and the dorsum of foot (30%) 右小腿和足背肌
 Ventral aspect 前面观



232 Muscles of the right leg and the dorsum of foot (30%) 右小腿和足背肌
Lateral aspect 外侧面观



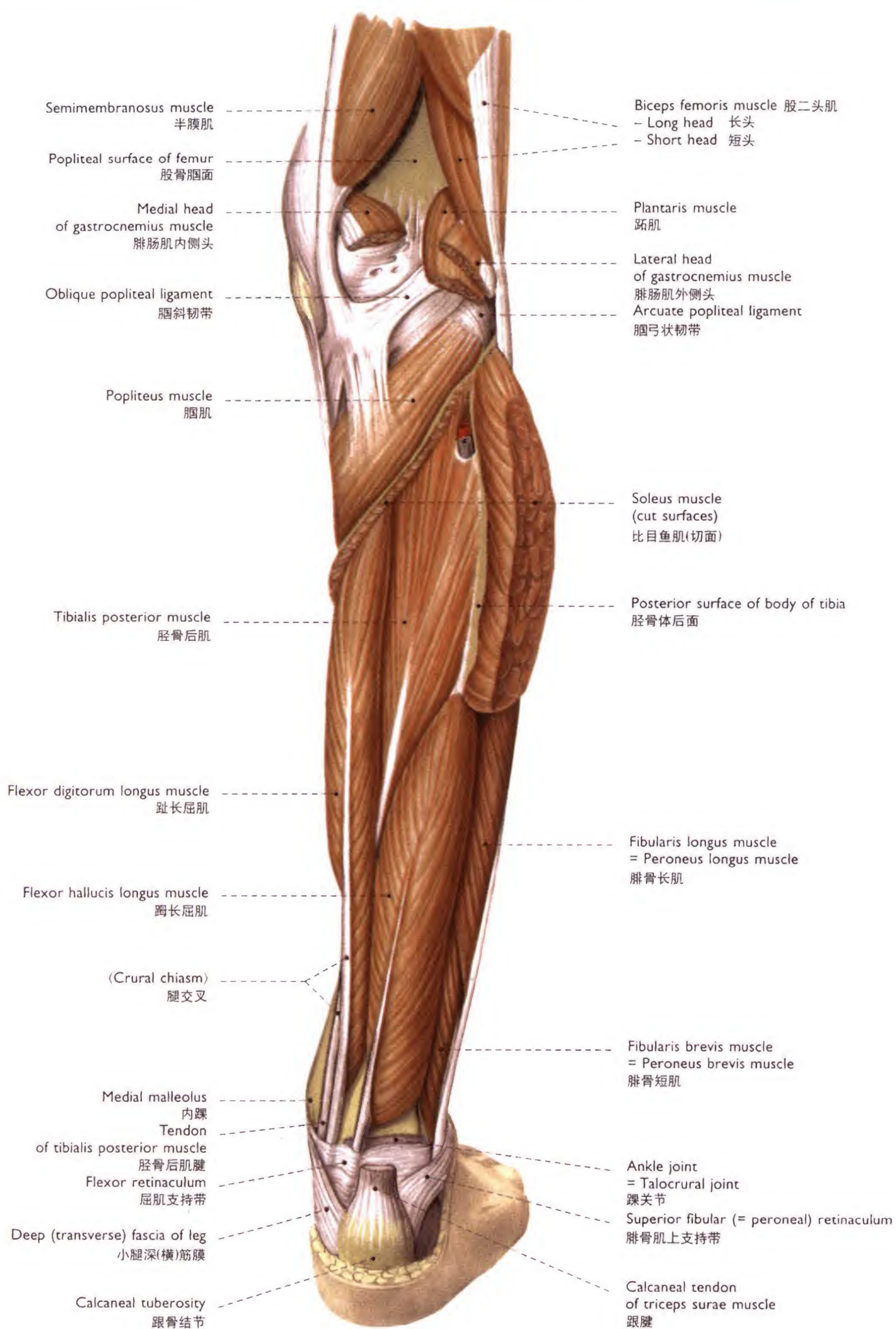
233 Muscles of the right leg (25%) 右小腿肌

Dorsal aspect 后面观

a Most superficial layer 浅层

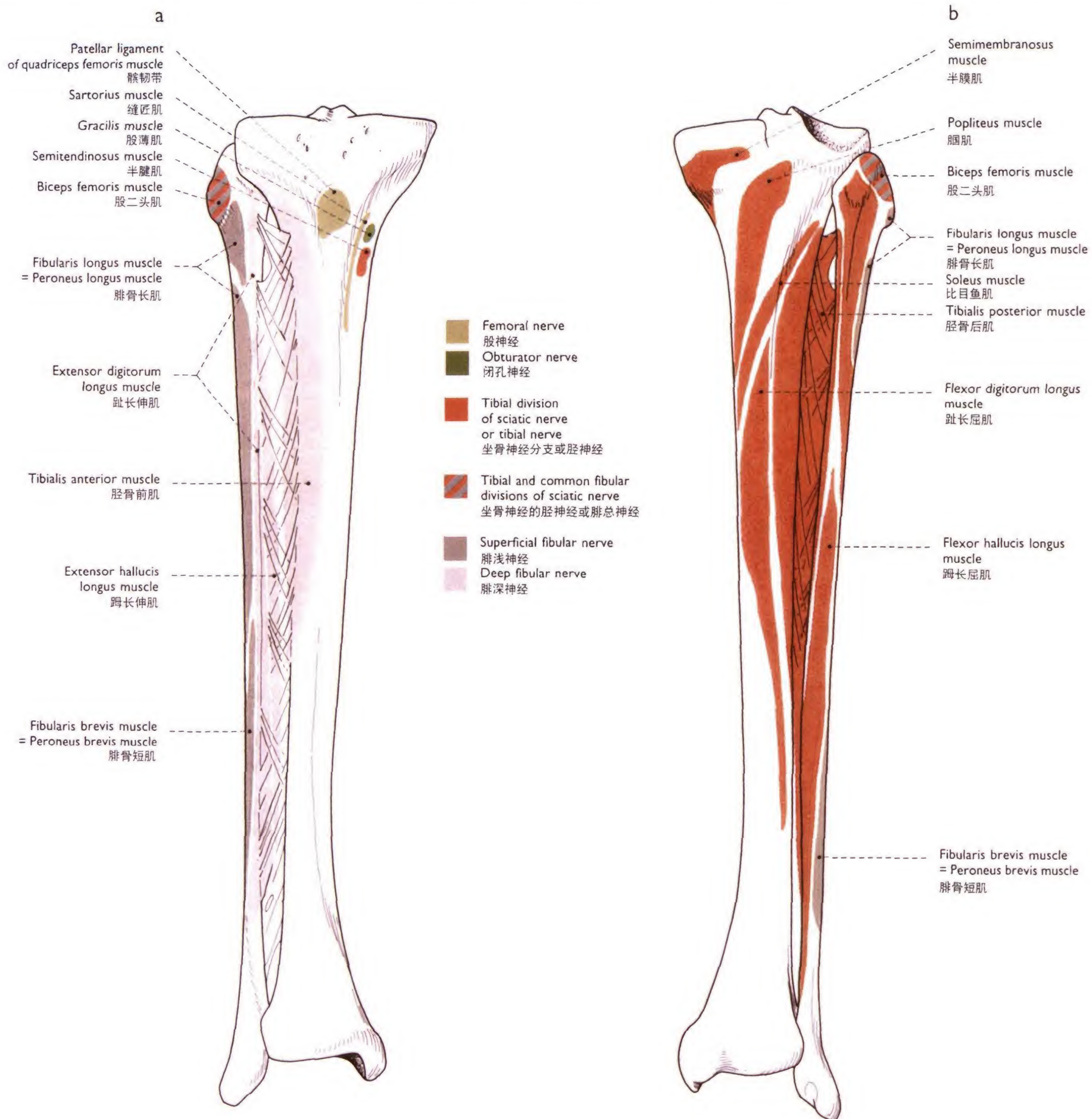
b Superficial layer after partial removal

of the gastrocnemius muscle 腓肠肌被部分去除后显示浅层肌



234 Muscles of the right leg (30%) 右小腿肌

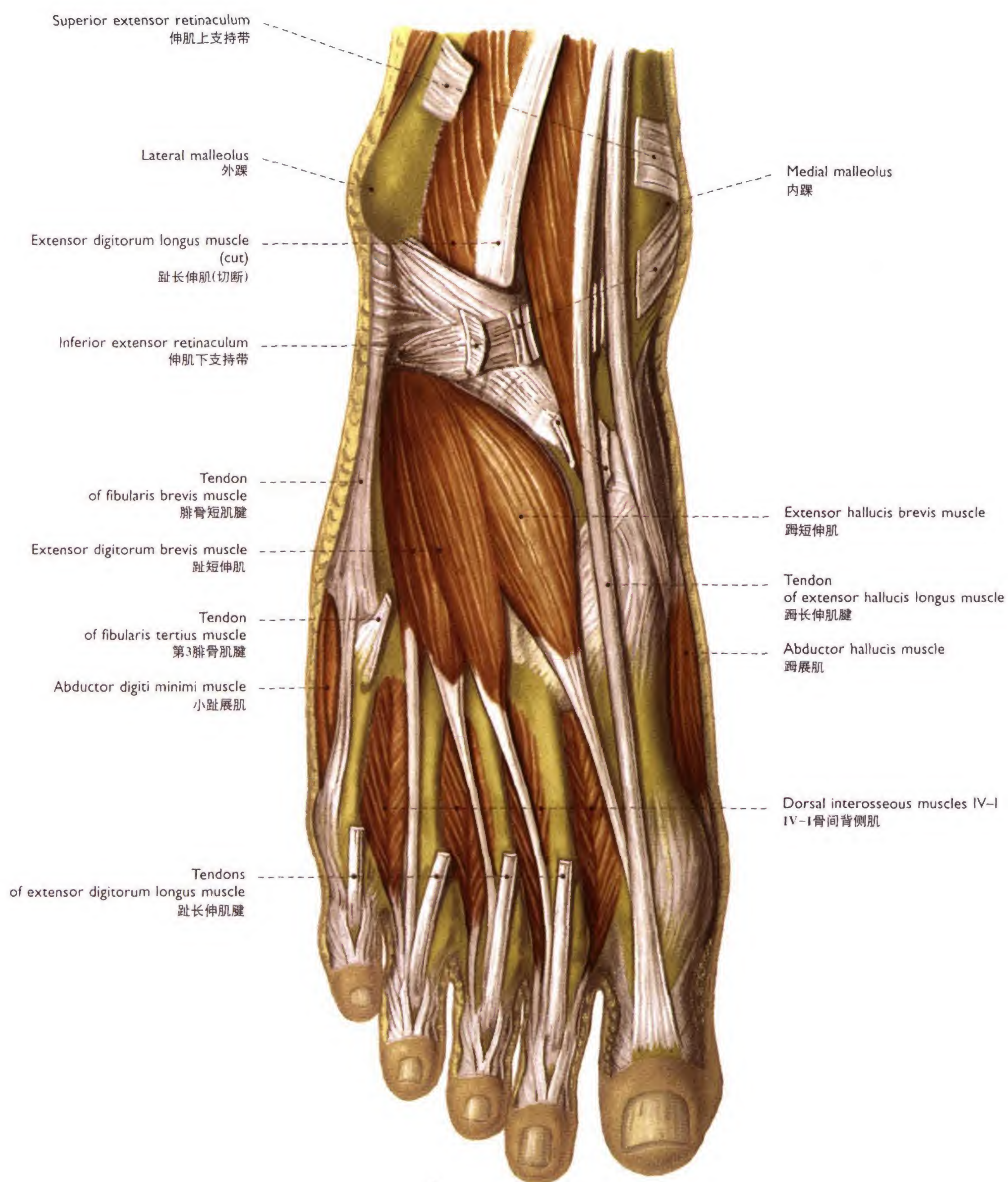
Deep layer, dorsal aspect 深层、后面观



235 Muscle attachments to the right tibia, fibula, and the interosseous membrane of leg 右胫骨、小腿骨间膜及腓骨的肌肉附着点

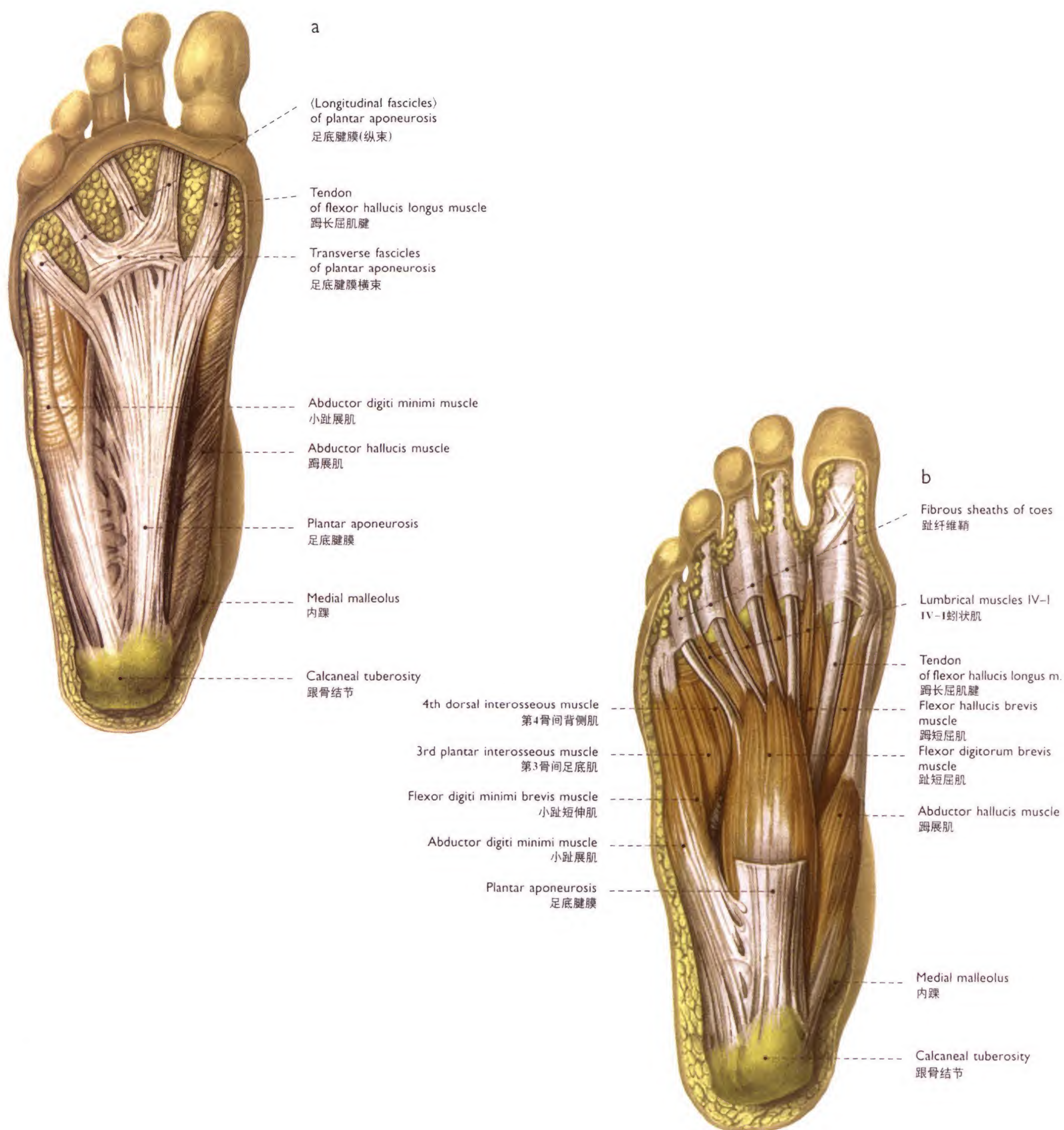
The colors indicate the innervation of the muscles attaching to the 彩色表示肌肉神经支配

a ventral surface 前面
b dorsal surface. 后面



236 Muscles of the dorsum of the right foot (75%) 右足背肌

The extensor digitorum longus muscle and the retinacula were partially removed. Ventral aspect 拇长伸肌和支持带部分被切除, 前面观

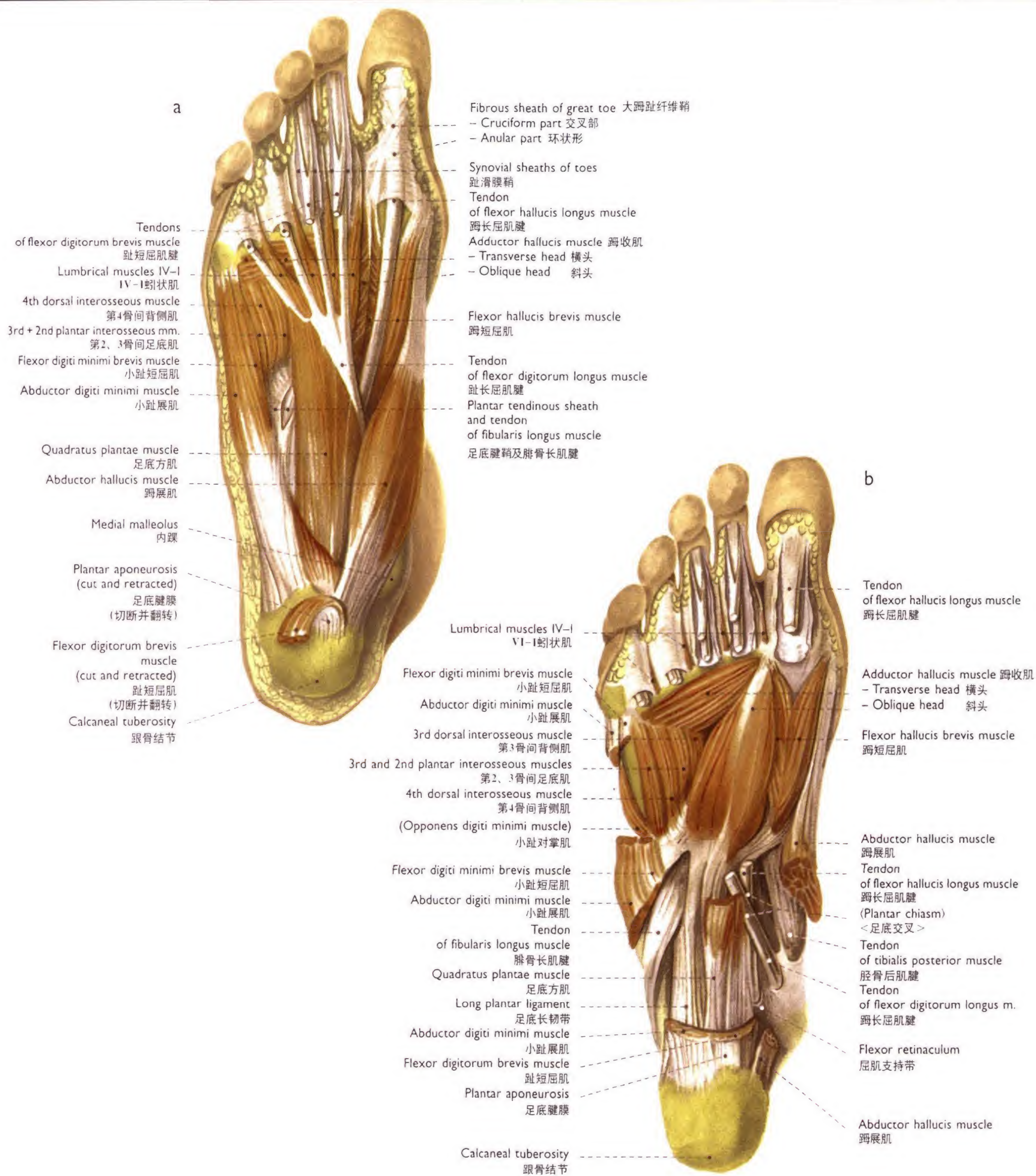


237 Muscles of the sole of the right foot (50%) 右跖肌

Plantar aspect 足底面观

a Plantar aponeurosis and superficial muscles 足底腱膜和浅层肌

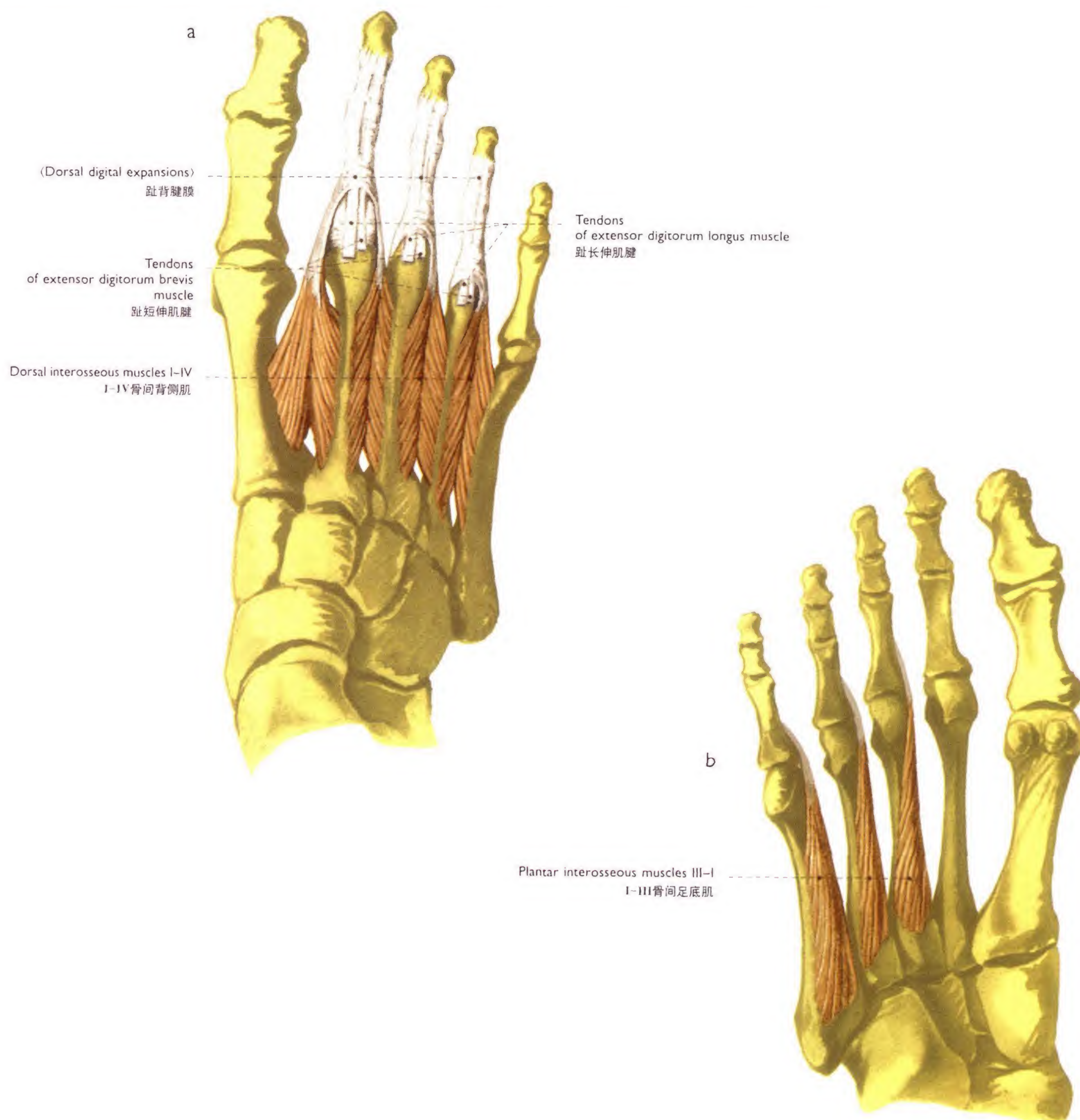
b Superficial layer after partial removal of the plantar aponeurosis 足底腱膜部分切除后显示浅层肌



238 Muscles of the sole of the right foot (50%) 右跖肌

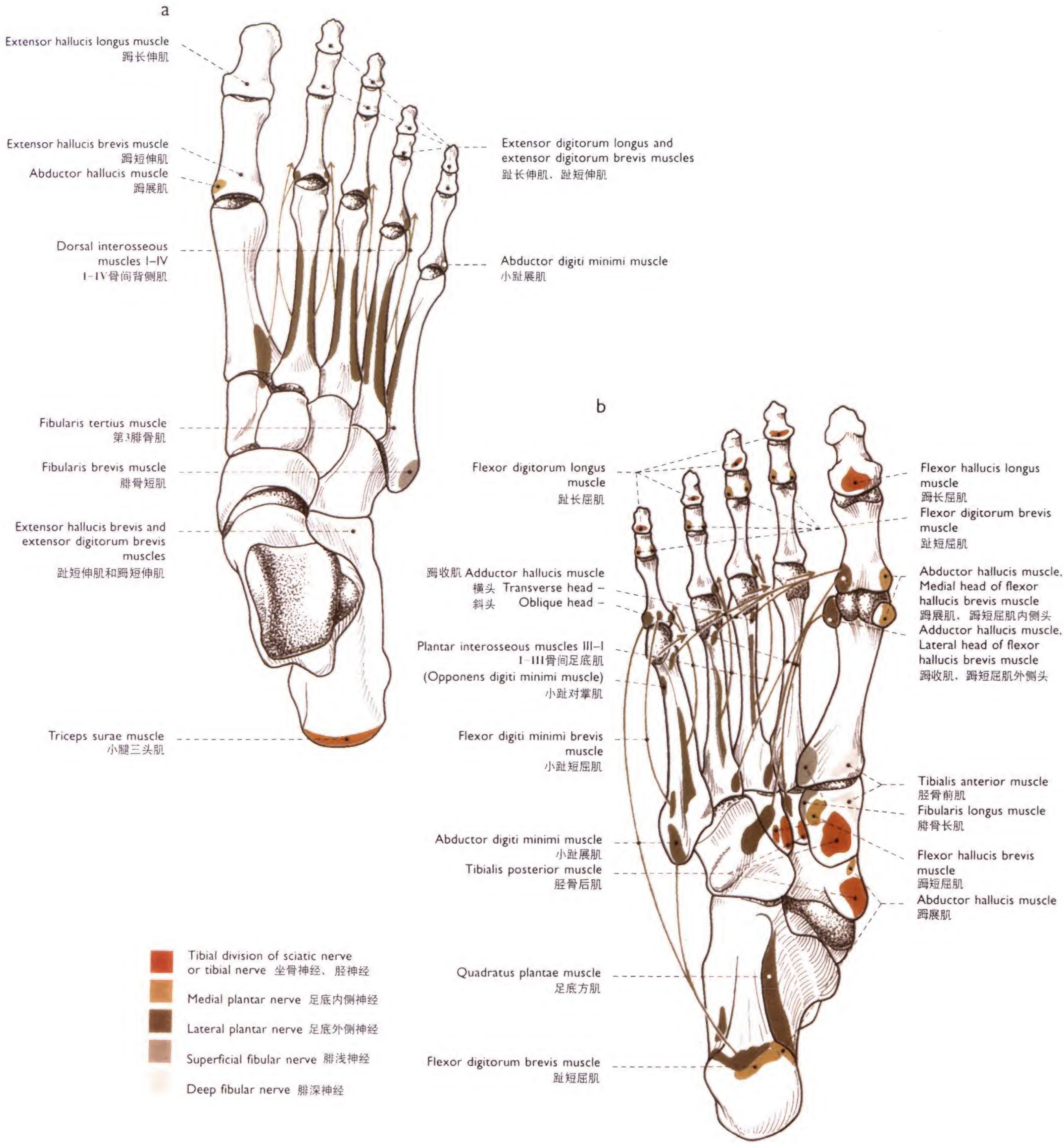
Plantar aspect 足底面观

- a Deep layer after partial removal of the plantar aponeurosis and the flexor digitorum brevis muscle 足底腱膜部分去除后的深层, 拇短屈肌
- b Deepest layer after extensive removal of the muscles of the superficial and deep layers 浅层及深层肌肉除去后的更深层



239 Interosseous muscles of the right foot (75%) 右足骨间肌

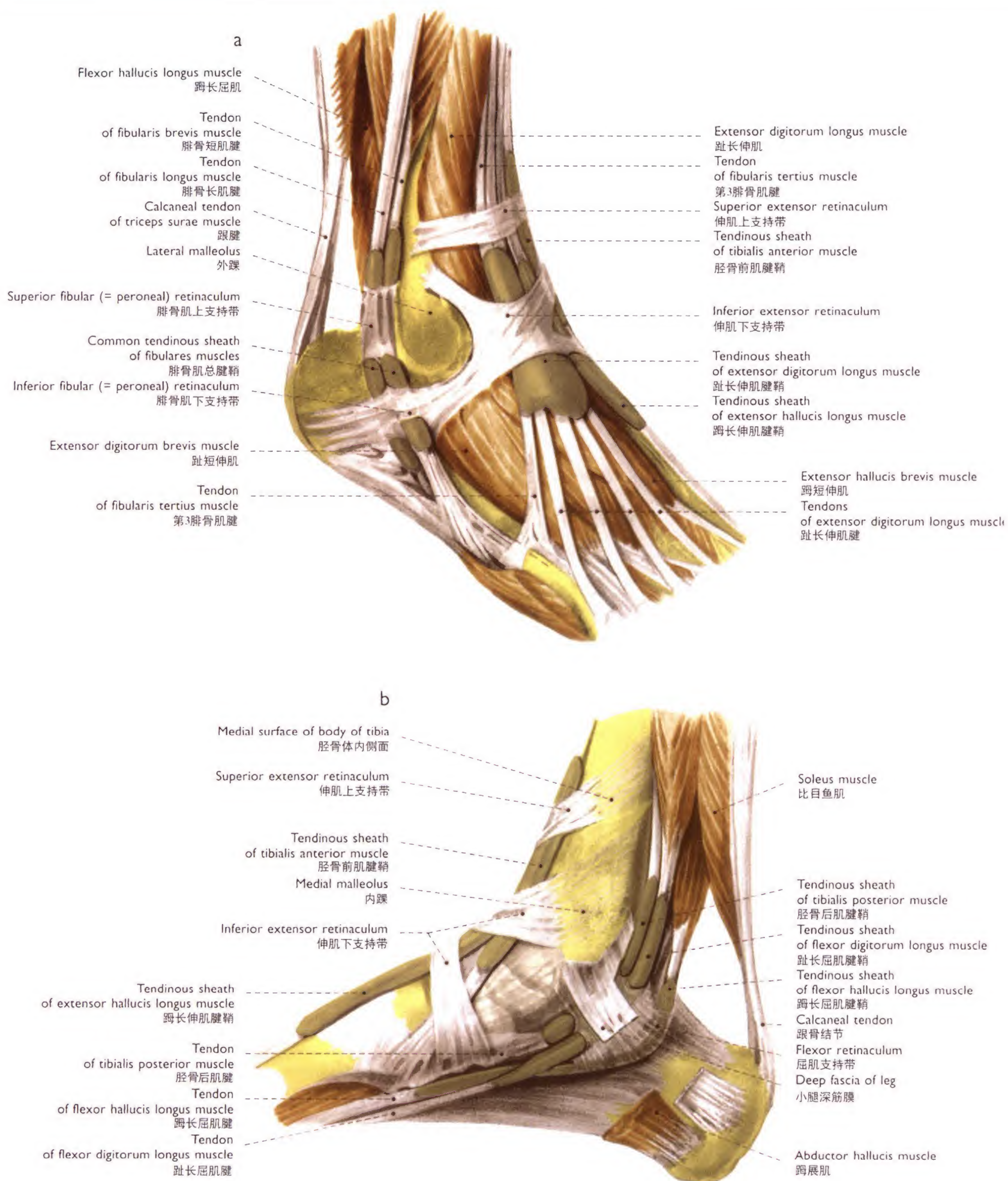
- a Dorsal interosseous muscles, dorsal aspect 骨间背侧肌, 背侧面观
b Plantar interosseous muscles, plantar aspect 骨间足底肌, 足底面观



240 Muscle attachments to the bones of the right foot 右足骨肌附着点

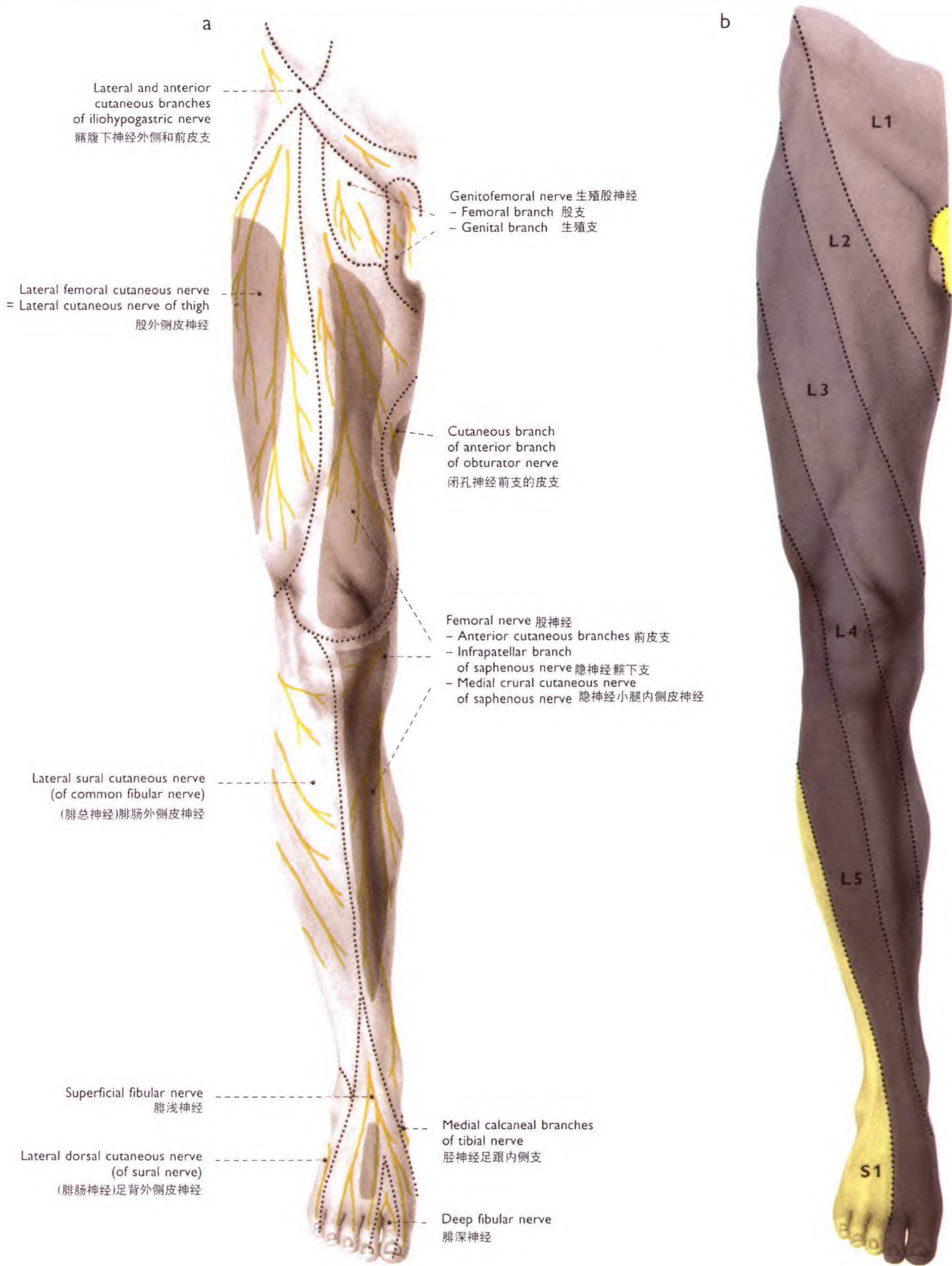
The colors indicate the innervation of the muscles attaching to the 彩色表示肌肉神经支配

a dorsal surface 背侧面
b plantar surface 足底面



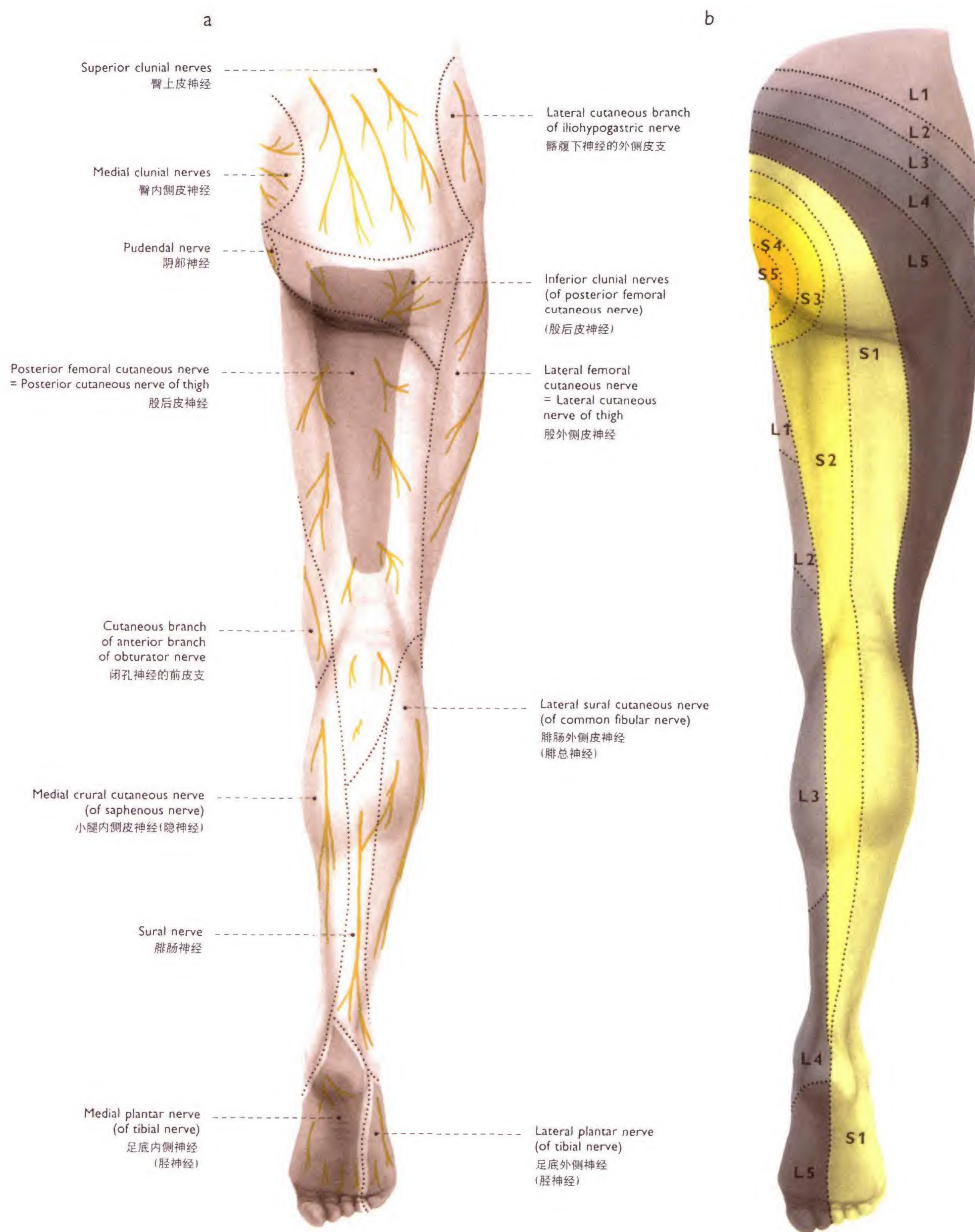
241 Tarsal tendinous sheaths of the right foot (50%) 右足跗骨腱鞘

a Lateral aspect 外侧面观
b Medial aspect 内侧面观



242 Cutaneous and segmental innervation of the right lower limb (20%) 右下肢皮神经和节段性神经支配

Schematic representations, ventral aspect 示意图、前面观
a Cutaneous nerves and areas of distribution, the autonomic 皮神经及其分布，不同深灰色代表不同神经支配区
b Segmental innervation (dermatomes) 节段性神经支配(皮区)

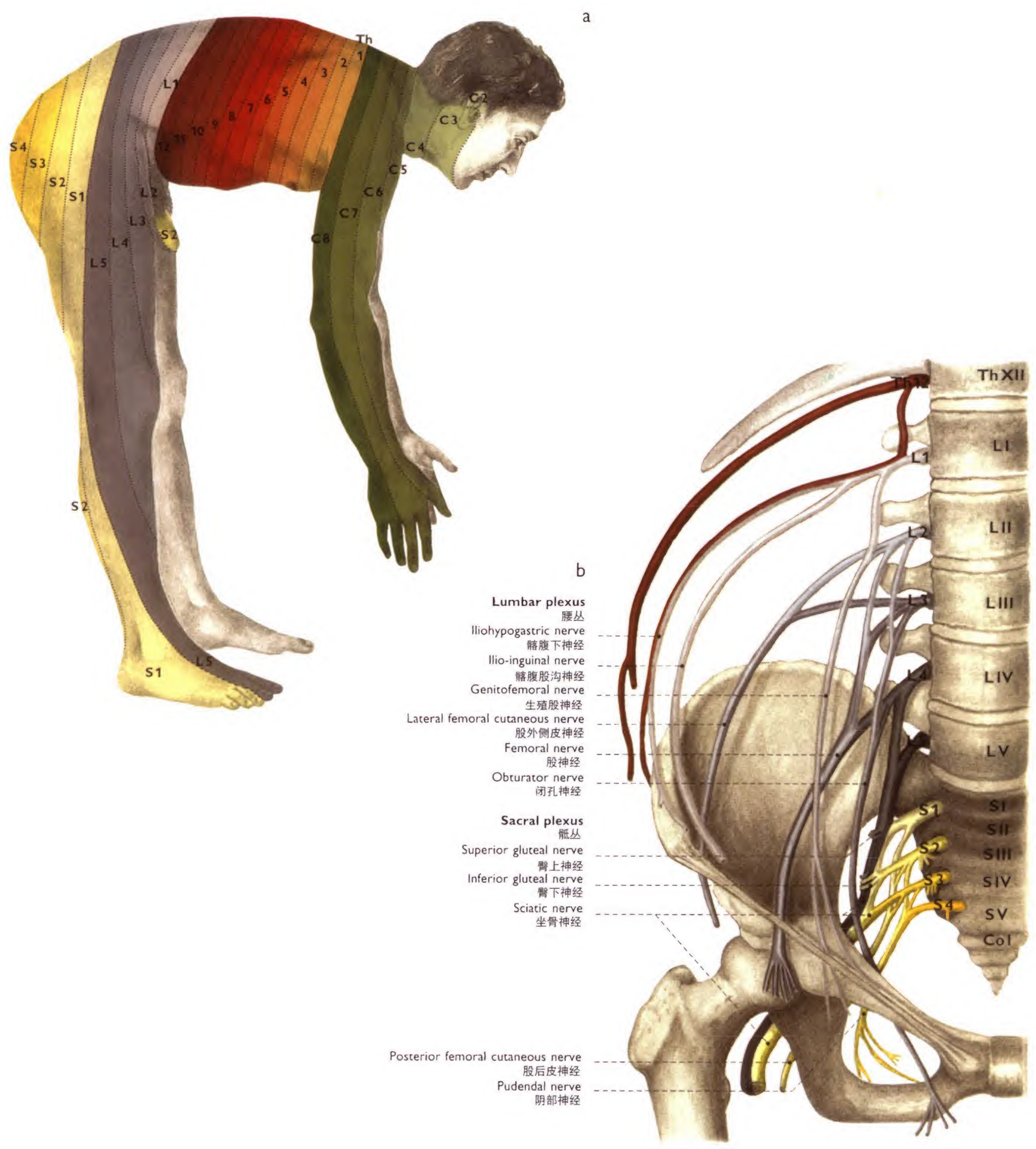


243 Cutaneous and segmental innervation

of the right lower limb (20%) 右下肢皮神经和节段性神经支配

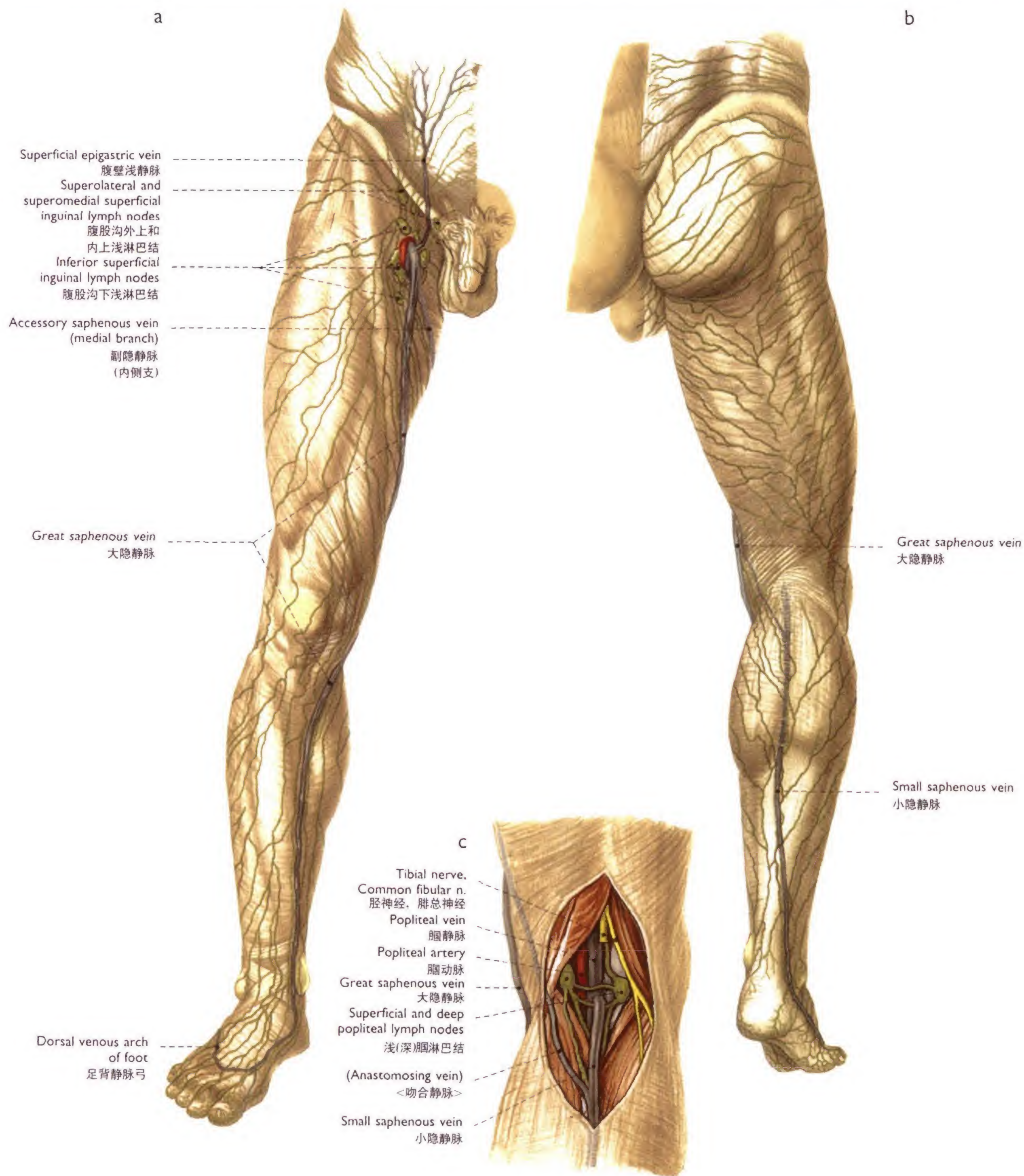
Schematic representations, dorsal aspect 示意图, 后面观

- a Cutaneous nerves and areas of distribution, the autonomic areas of the different nerves are given in a darker gray. 同神经支配区
- b Segmental innervation (dermatomes) 节段性神经支配(皮区)



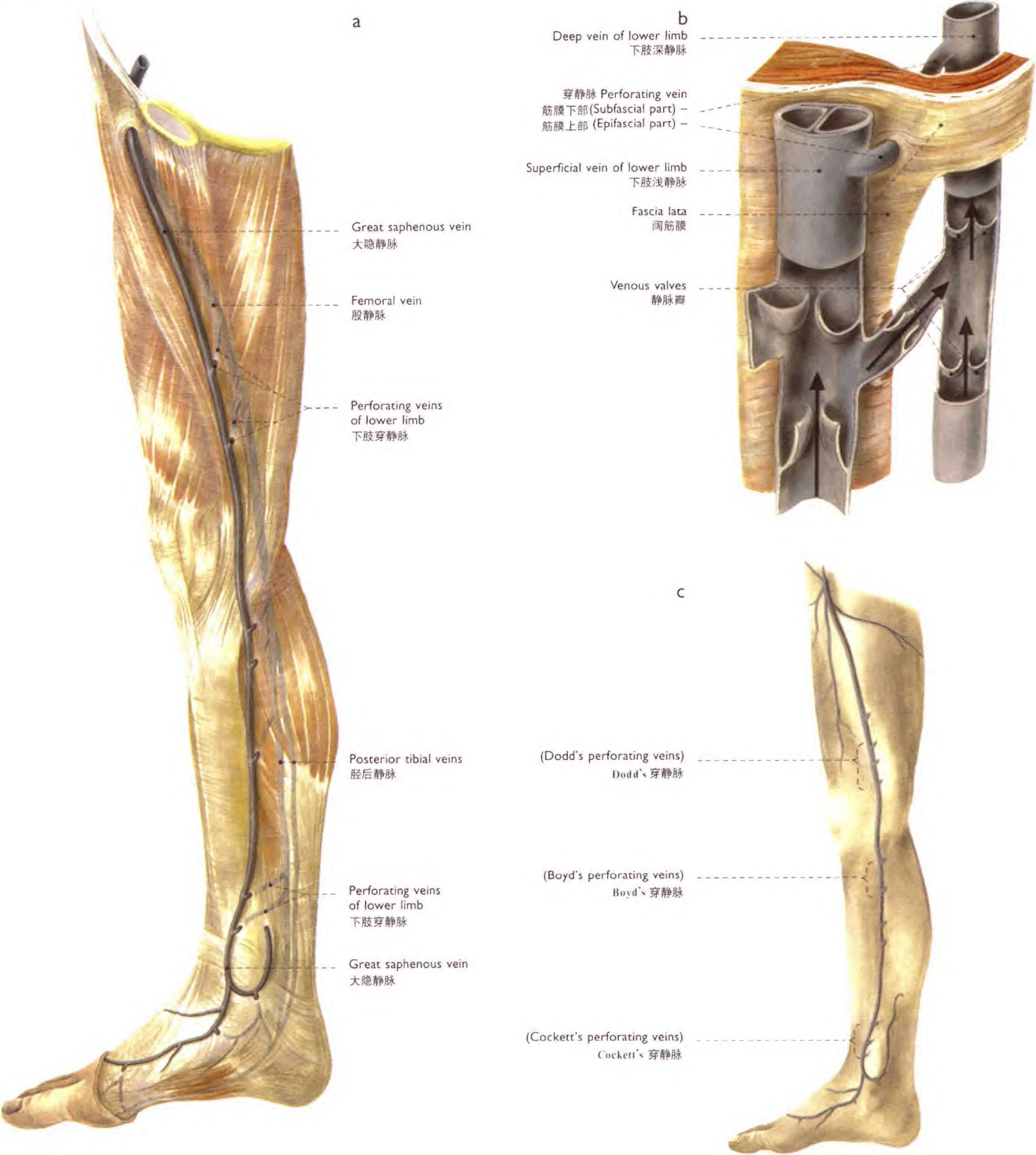
244 Segmental innervation and lumbosacral plexus 节段性神经支配和腰骶丛

a Segmental innervation (dermatomes) of the upper limb, trunk, 上、下肢及躯干节段性神经支配(皮区) and lower limb (according to von Lanz and Wachsmuth, 1972) (引自Von Lsanz和Wachsmuth, 1972)
b Plan of the lumbosacral plexus 腰骶丛平面图



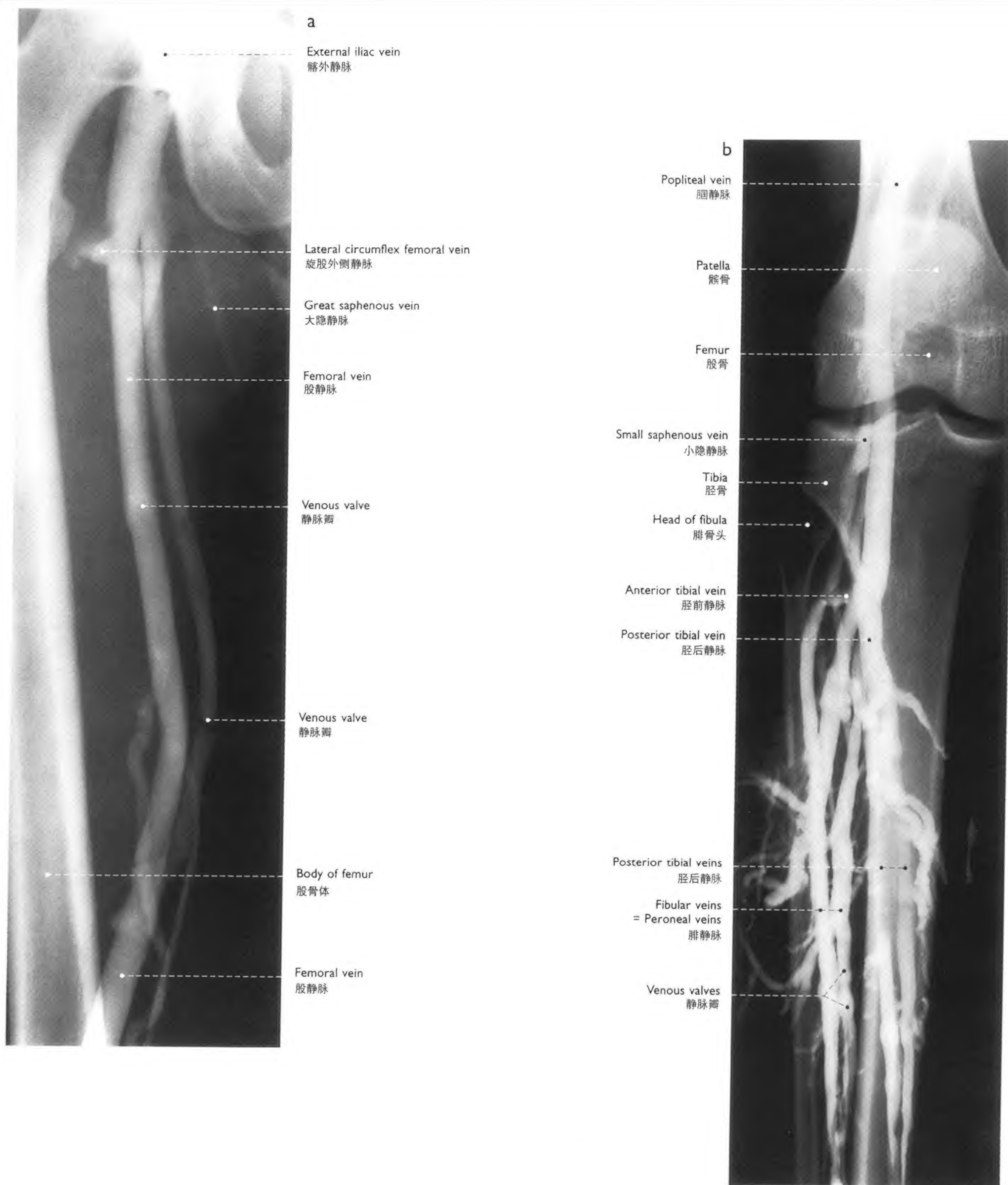
245 Lymphatic vessels and lymph nodes of the right lower limb 右下肢淋巴管和淋巴结

- a Ventral aspect (20%) 前面观
b Dorsal aspect (20%) 后面观
c Lymphatic vessels of the popliteal fossa (30%), dorsal aspect 腓窝淋巴管, 后面观



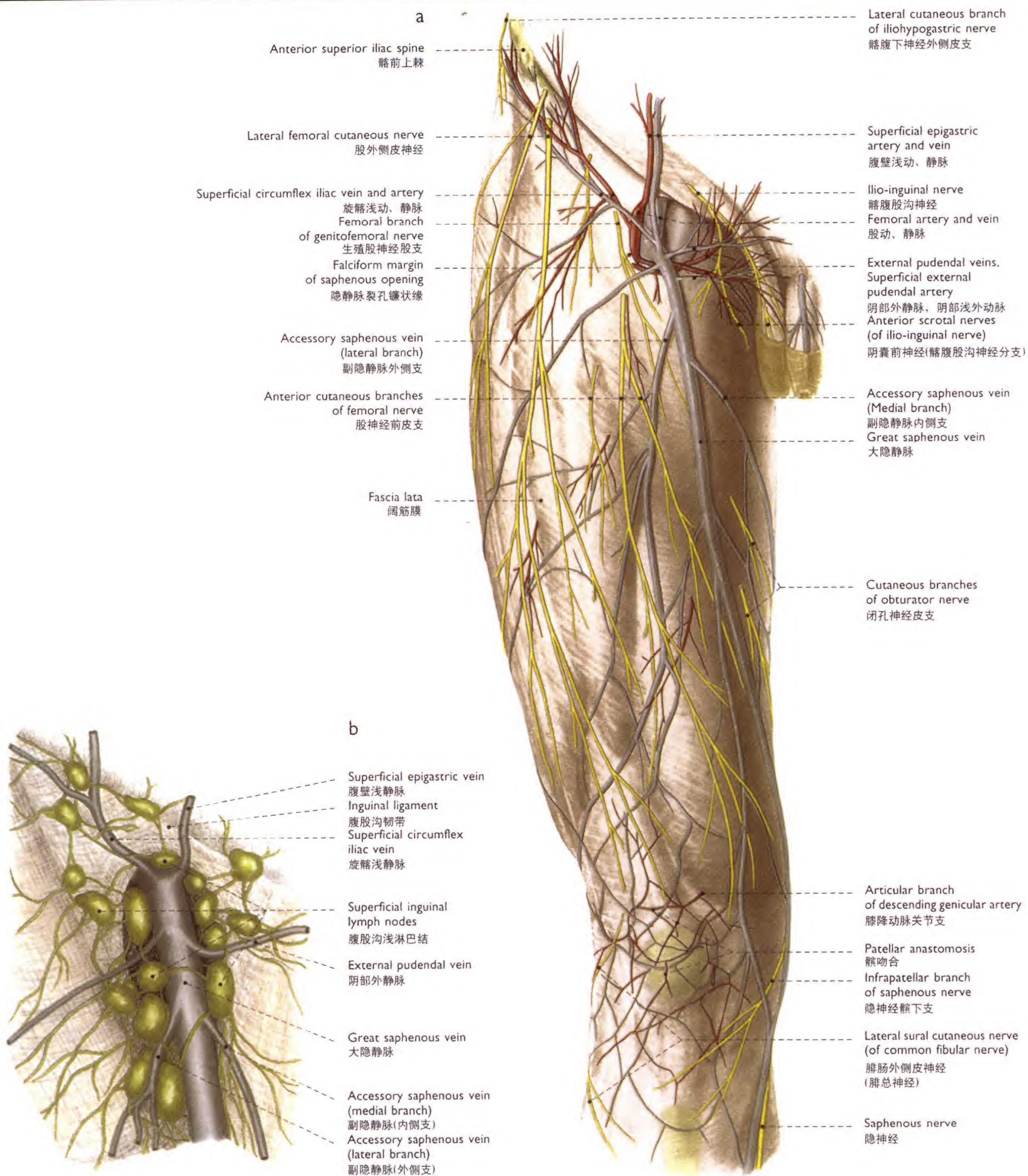
246 Veins of the right lower limb 右下肢静脉

- a Superficial and deep veins of the lower limb (20%), medial aspect 右下肢浅、深静脉，内侧面观
- b Connection between superficial and deep veins of the lower limb by perforating veins (200%), schematic representation 连接下肢深浅静脉的穿静脉，示意图
- c Main localization of perforating veins over the lower limb (10%), medial aspect 下肢穿静脉主要部位，内侧面观



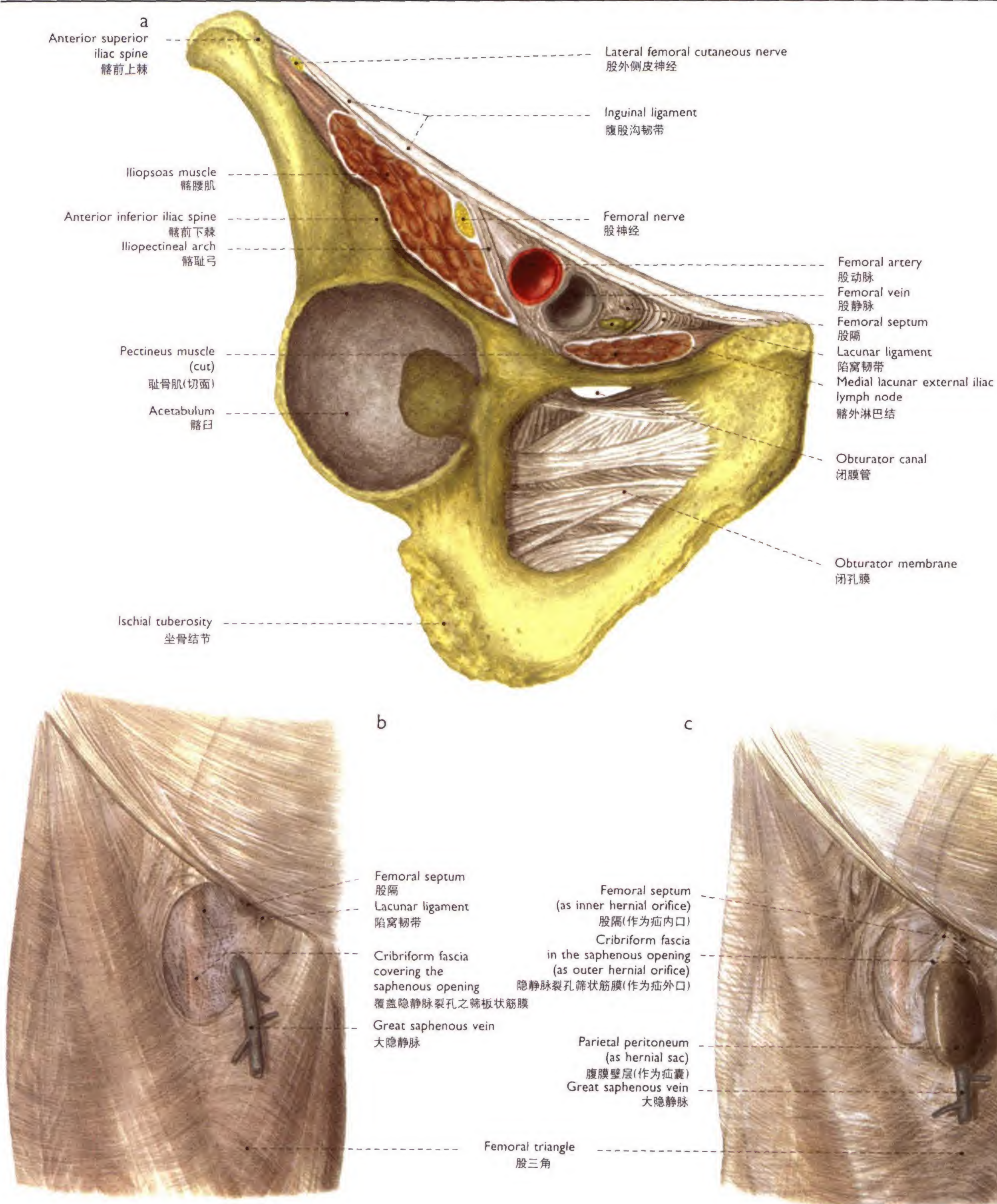
247 Veins of the right lower limb (45%) 右下肢静脉

- a Anteroposterior venogram of the thigh 大腿静脉造影图，前后位片
b Anteroposterior venogram of the leg 小腿静脉造影图，前后位片



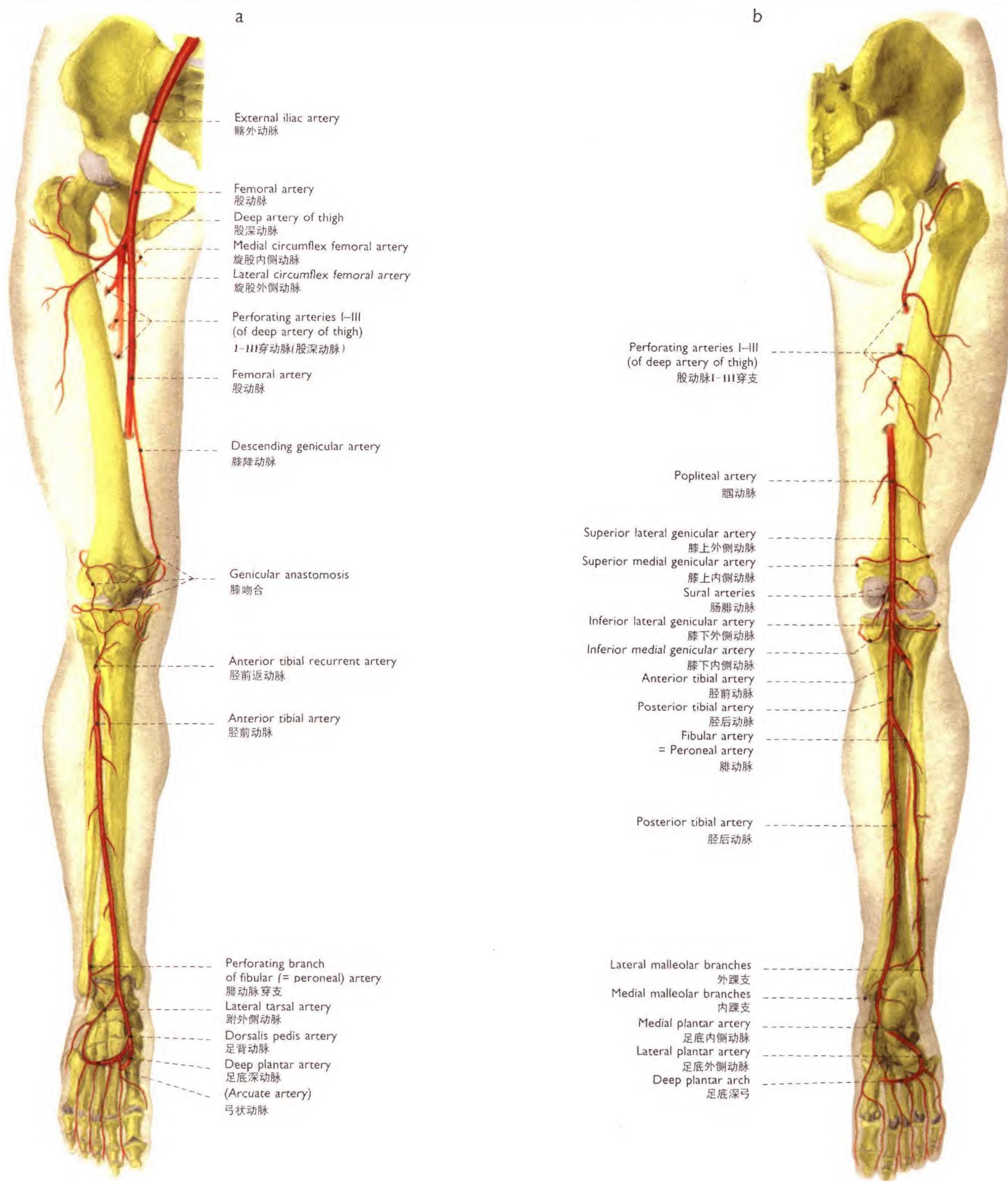
248 Subcutaneous blood vessels, nerves, and lymph nodes of the right thigh 右侧大腿皮下血管、神经、淋巴结

- a Ventral aspect (30%) 前面观
b Superficial veins and lymph nodes in and around the saphenous opening (70%) 隐静脉裂孔处浅表淋巴结和静脉



249 Inguinal region and femoral triangle 腹股沟区和股三角

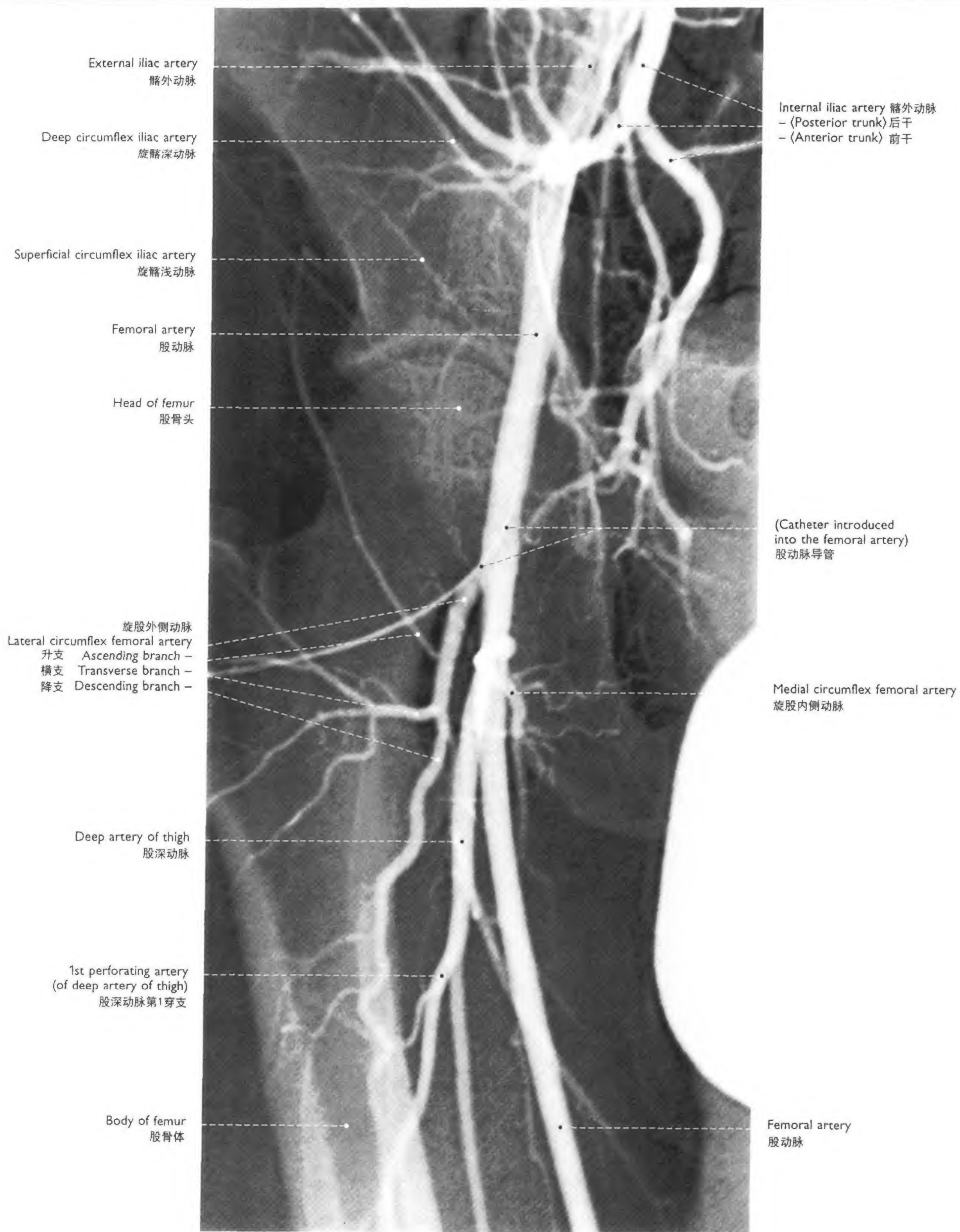
- a Structures passing posterior to the inguinal ligament (60%)
(according to von Lanz and Wachsmuth, 1972).
inferior (distal) aspect 通过腹股沟韧带后方的结构, 下面观
- b, c Femoral triangle, saphenous opening, and femoral hernia (30%).
ventral aspect 股三角、隐静脉裂孔、股疝, 前面观



250 Arteries of the right lower limb (20%) 右下肢动脉、示意图

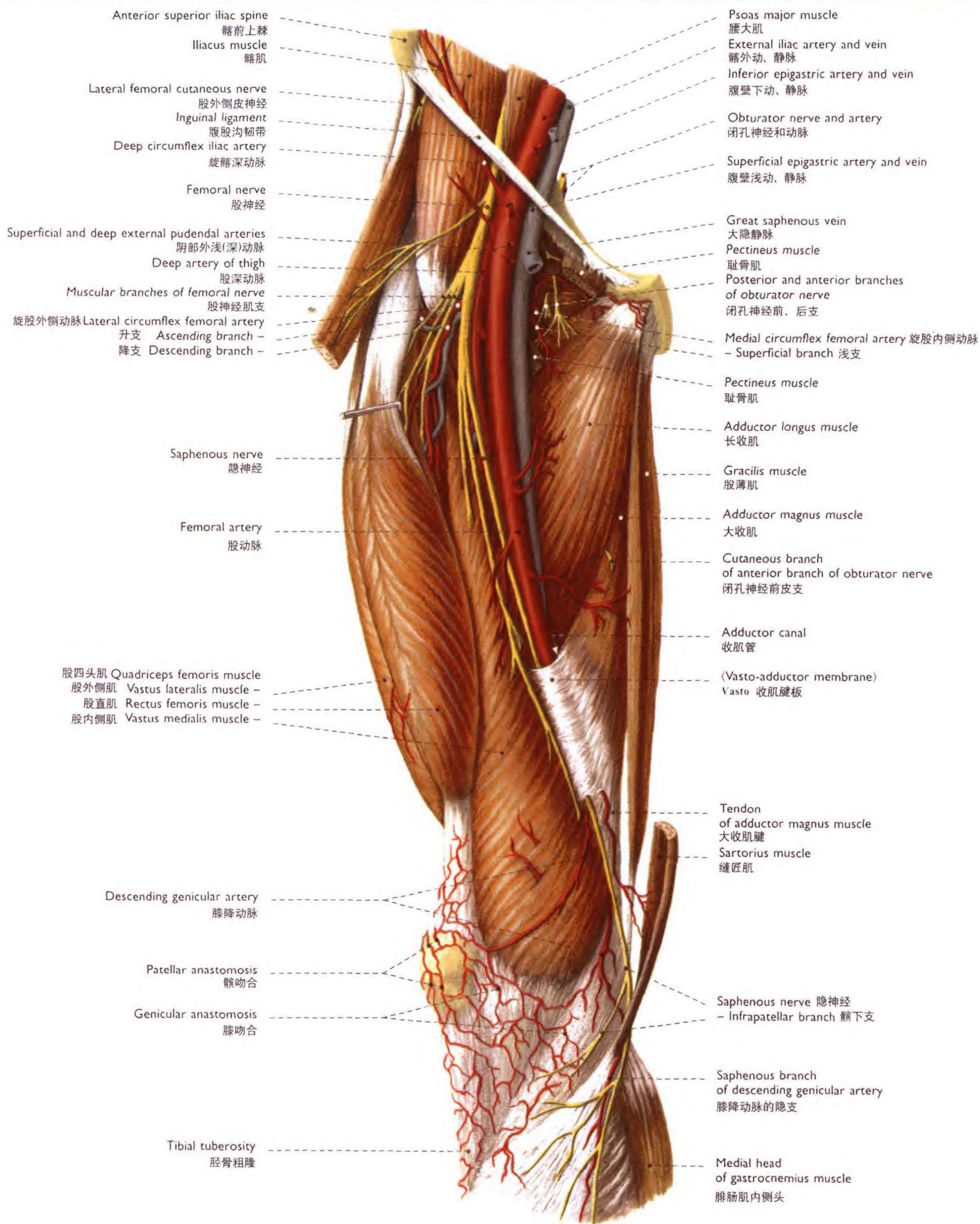
Schematic representations

- a Ventral aspect 前面观
b Dorsal aspect 后面观



251 Arteries of the right lower limb (80%) 右下肢动脉

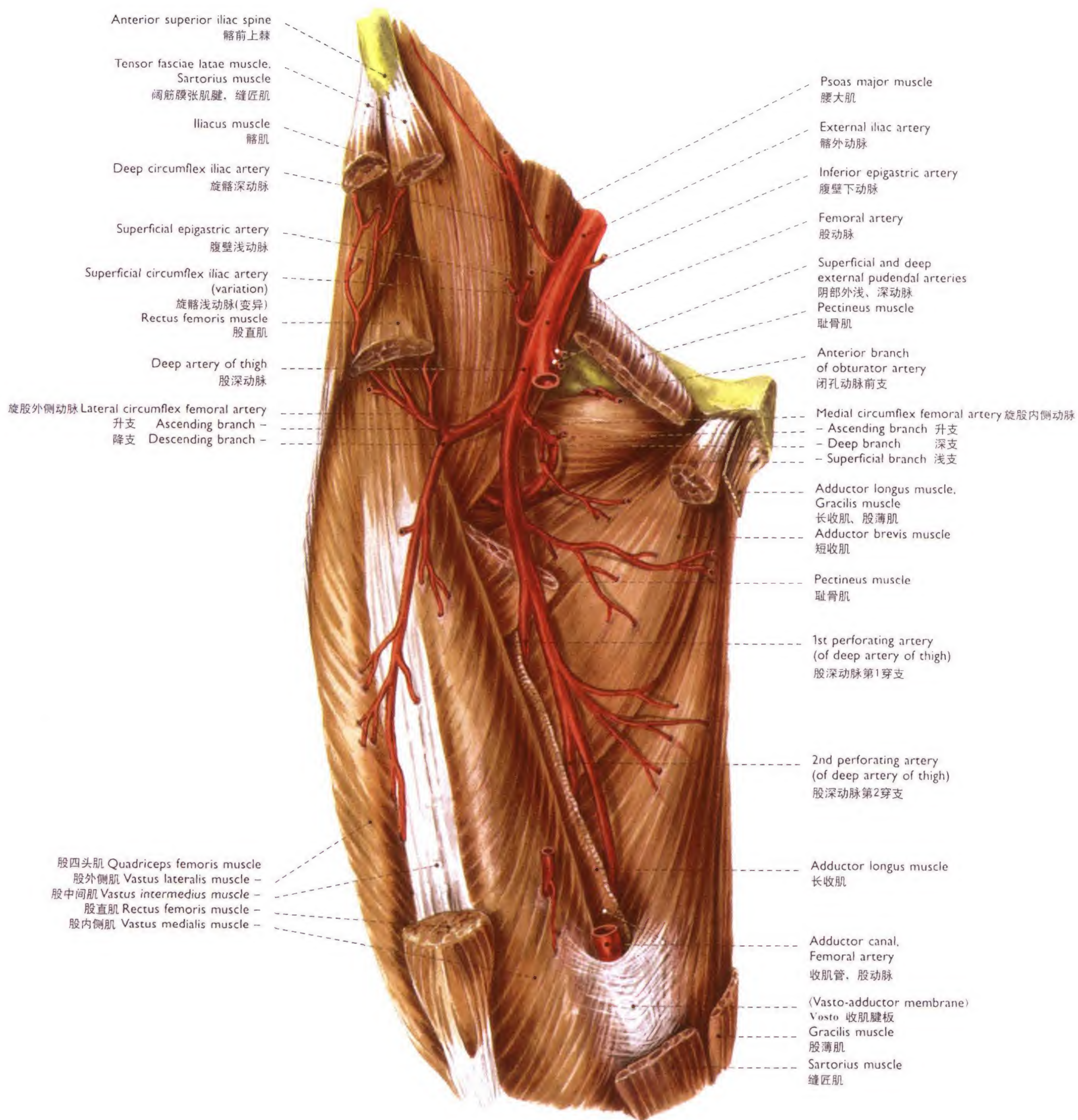
Anteroposterior arteriogram of pelvic and femoral arteries 盆腔动脉和股动脉前后位动脉造影图



252 Blood vessels and nerves of the right thigh

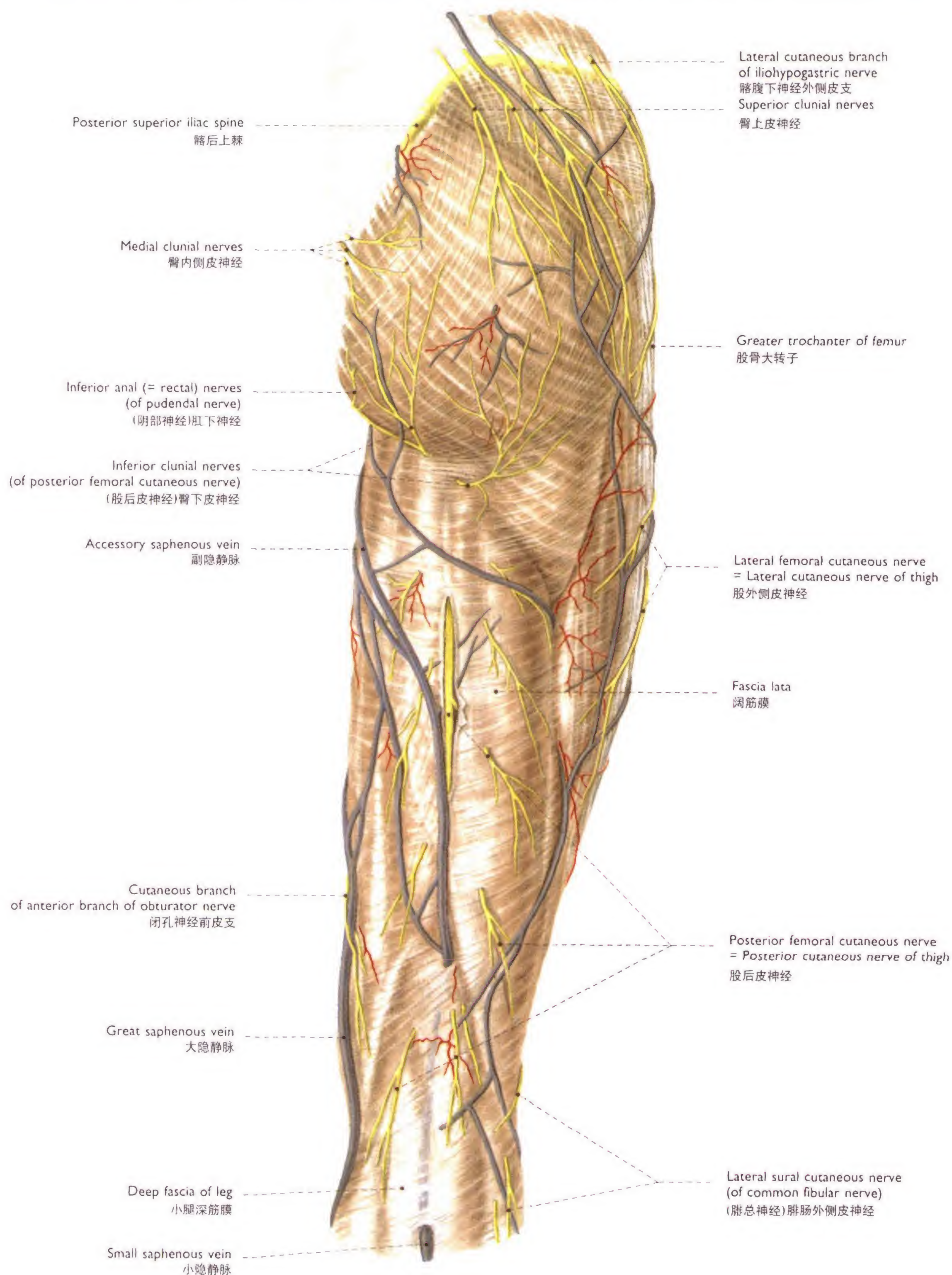
and knee (30%) 右股、膝的血管、神经

The sartorius and pectineus muscles were partially removed. 缝匠肌和耻骨肌被部分去除
Ventral aspect 前面观

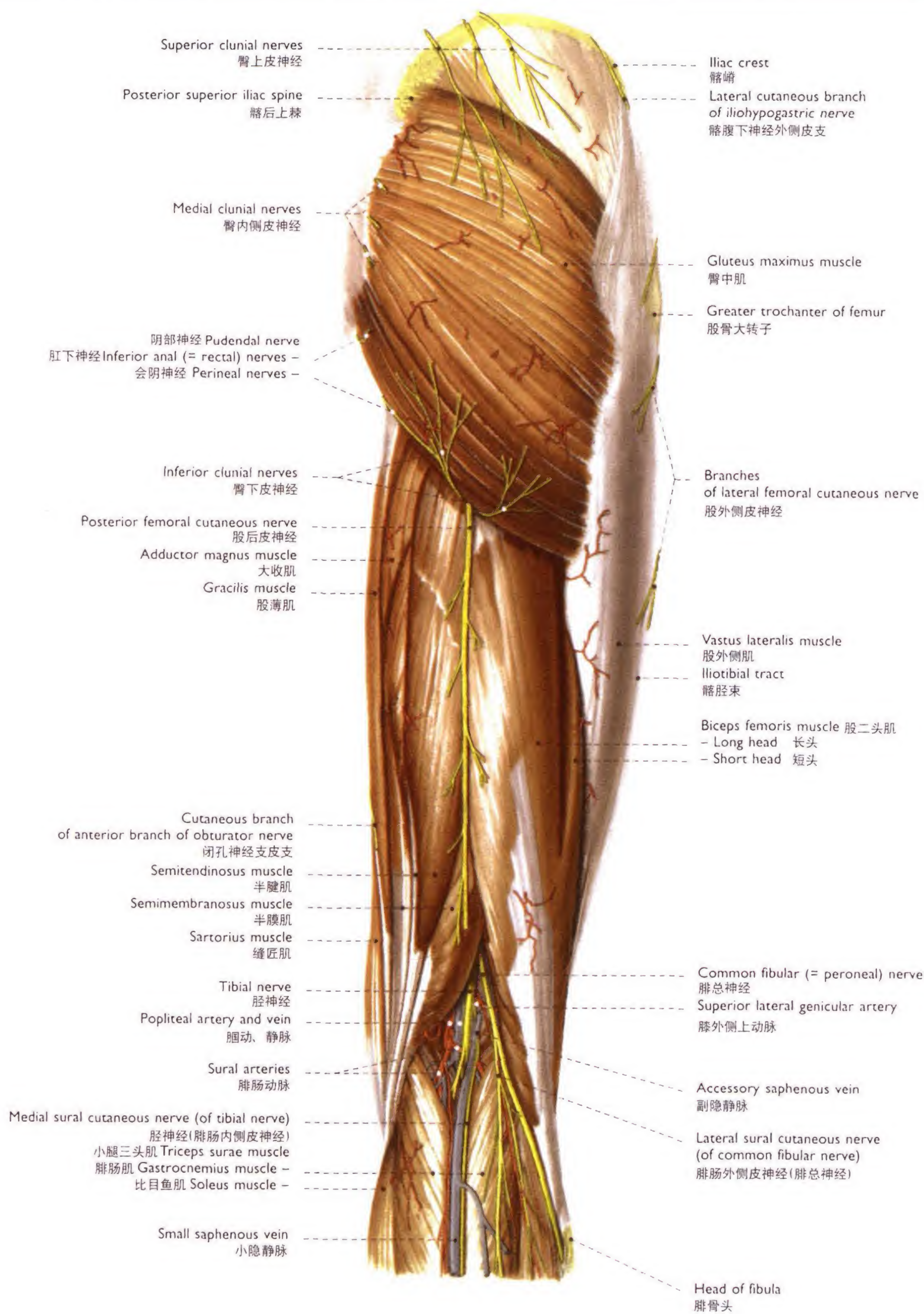


253 Deep artery of thigh and its branches
in the right thigh (40%) 股深动脉及其分支

The superficial muscles were partially removed. 浅肌被部分去除
Ventral aspect 前面观

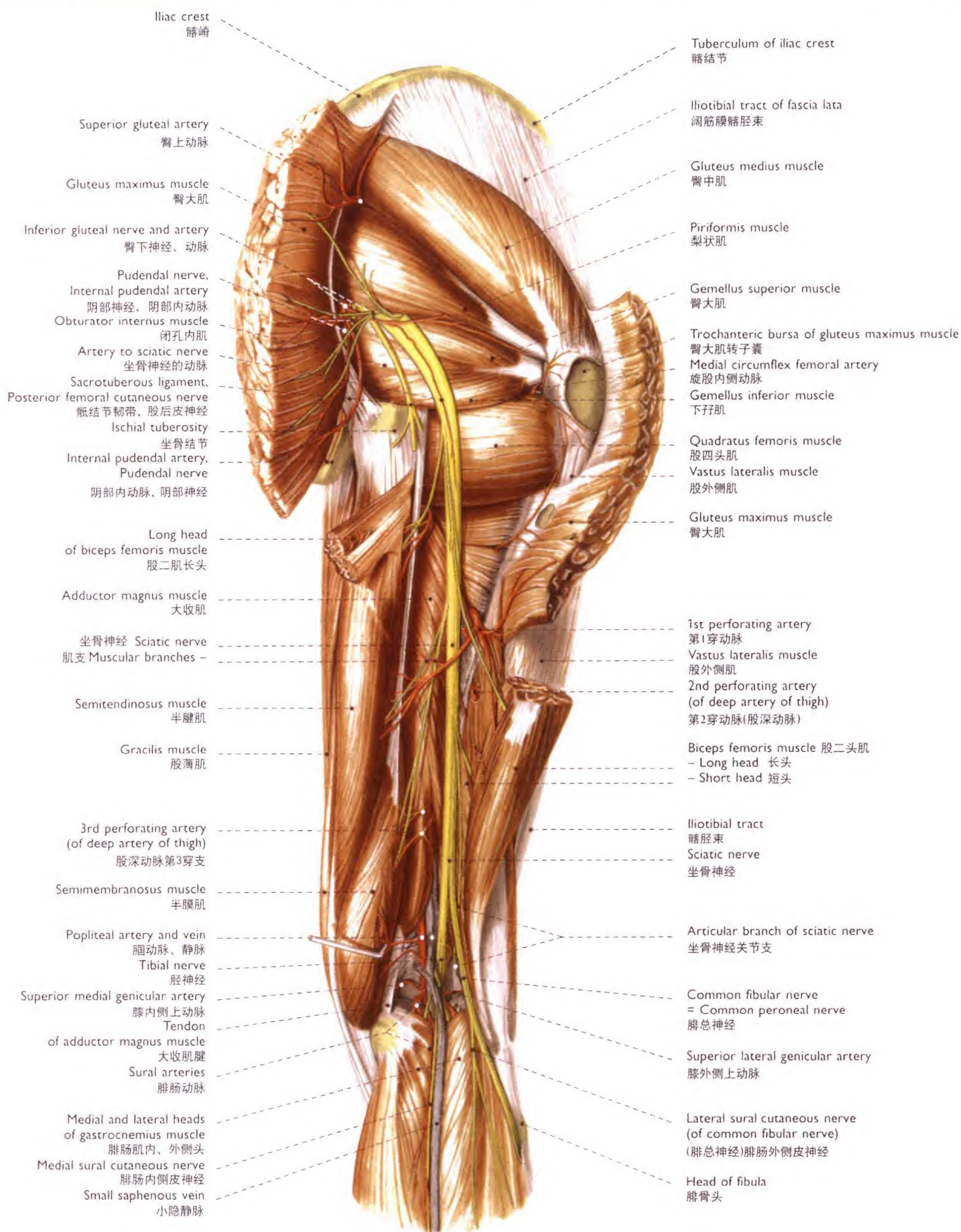


254 Subcutaneous blood vessels and nerves
of the gluteal region, thigh, and popliteal fossa
of the right side (30%) 右臀区、大腿和腘窝的皮下血管、神经
Dorsal aspect 后面观



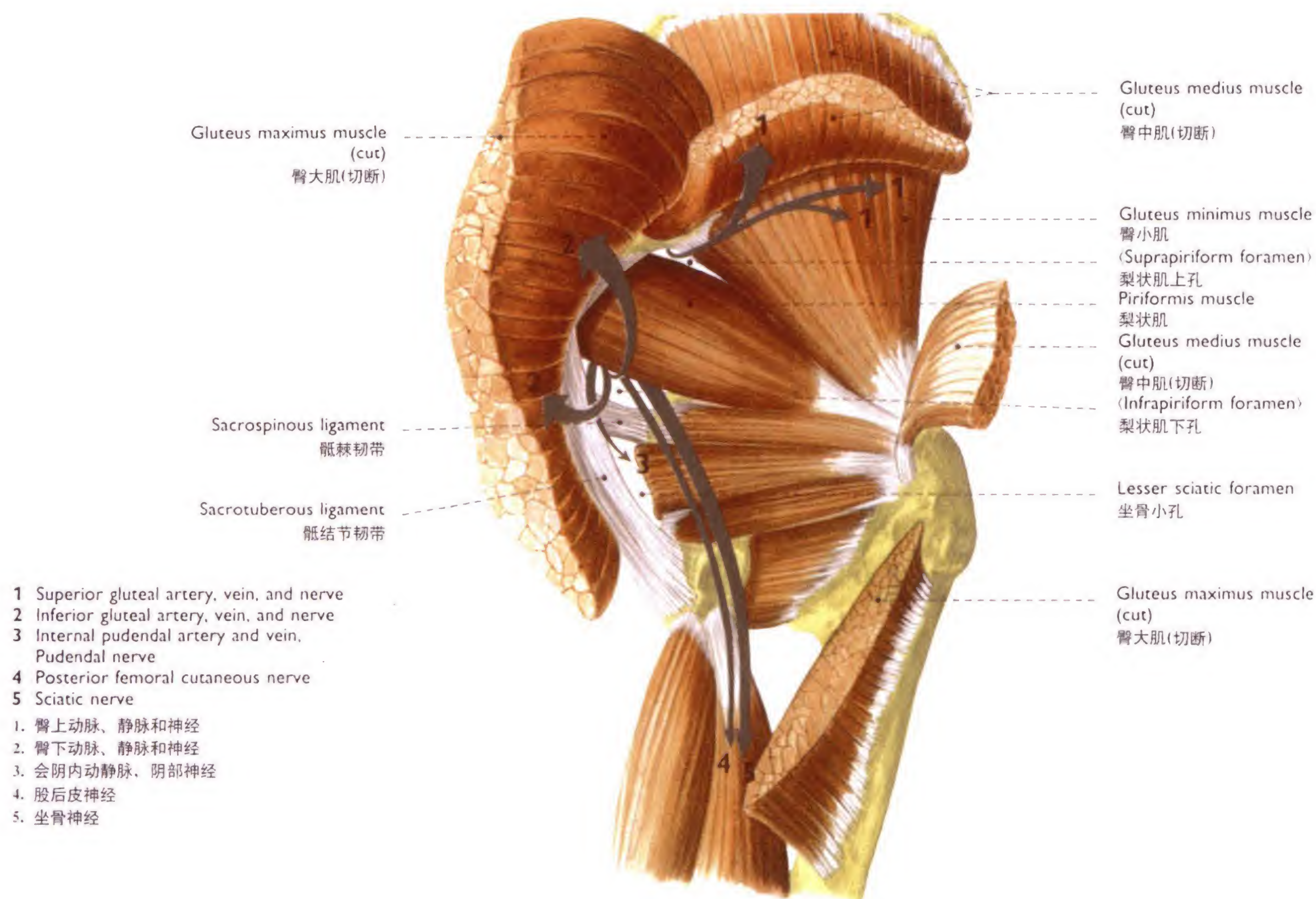
255 Blood vessels and nerves of the gluteal region, thigh, and popliteal fossa of the right side (30%)

臀区、大腿、腘窝的血管神经
The fasciae of the lower limb were removed. 下肢筋膜被切除



256 Blood vessels and nerves of the gluteal region, thigh, and popliteal fossa of the right side (30%) 右臀、大腿、腘窝血管神经

The gluteus maximus muscle and the long head of the biceps femoris muscle were divided. Dorsal aspect 臀大肌和股二头肌长头被切除后，后面观



b

Anterior superior
iliac spine
髂前上棘

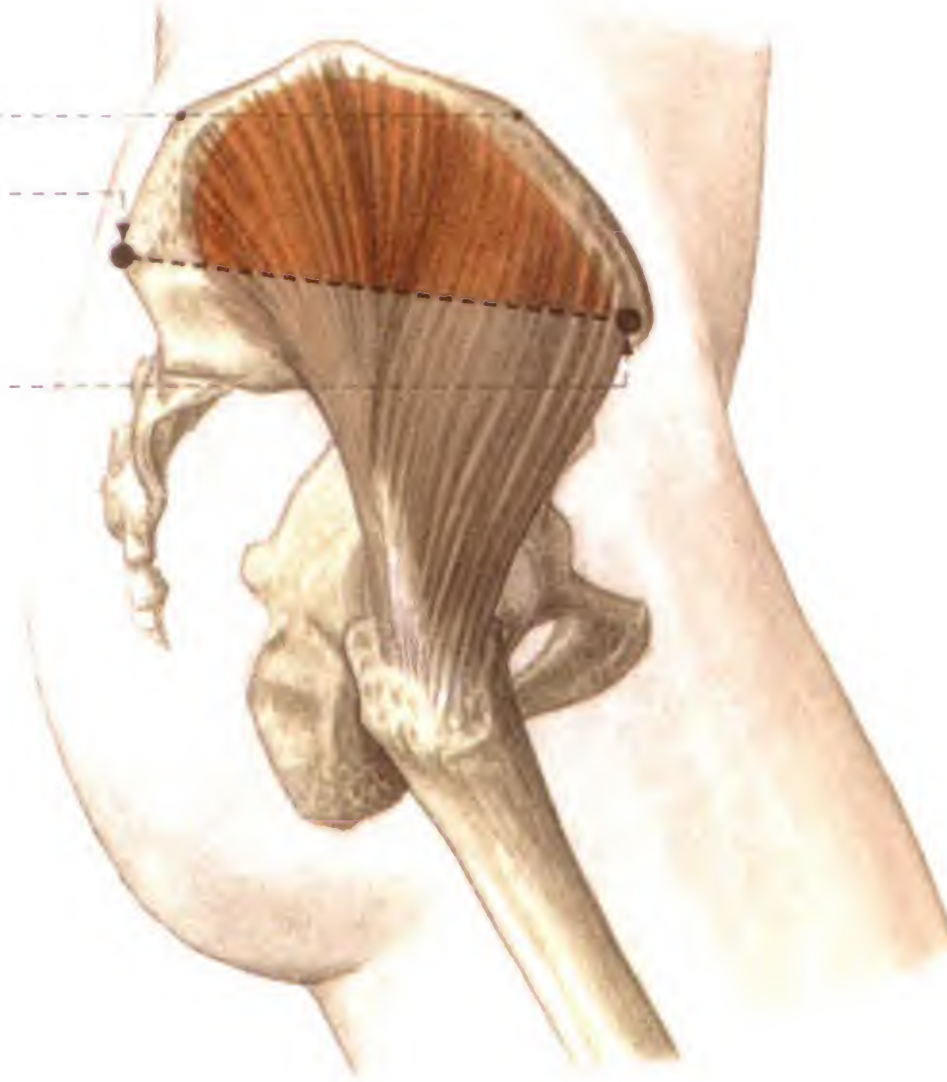
Greater trochanter
of femur
股骨大转子

c

Iliac crest
髂嵴

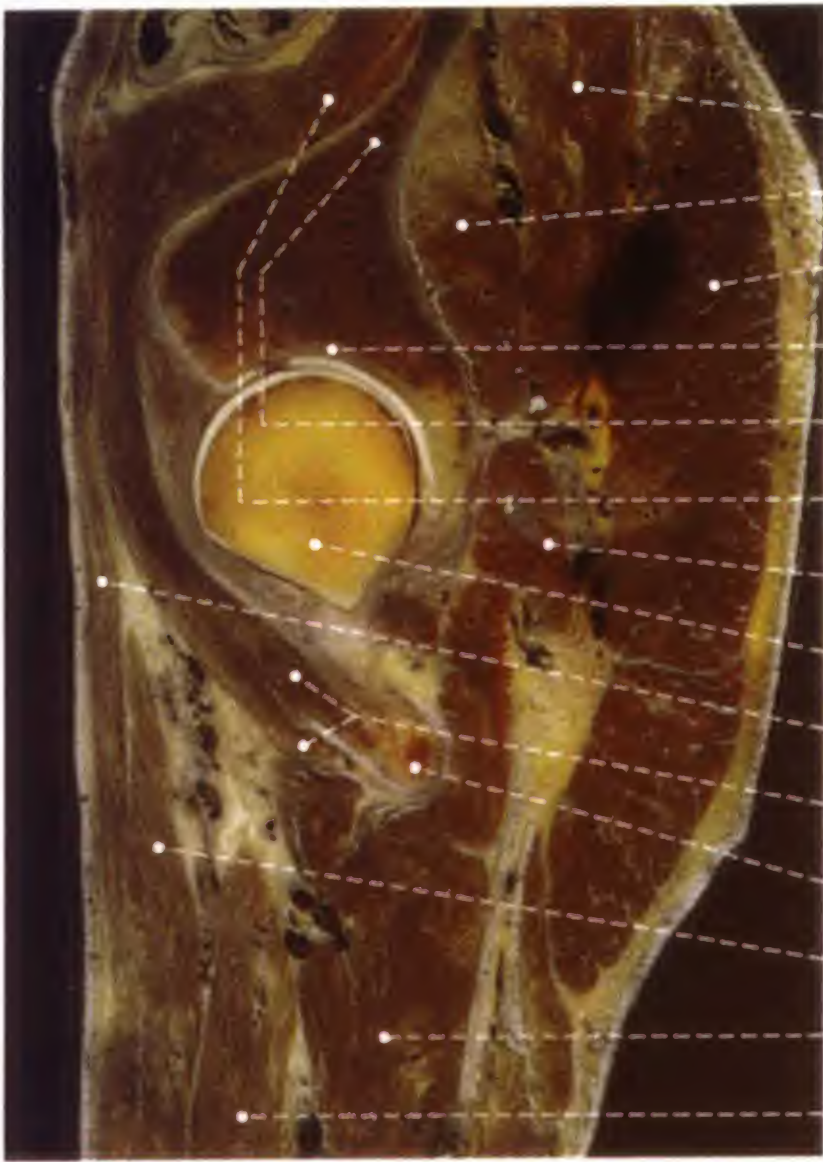
Posterior superior
iliac spine
髂后上棘

Anterior superior
iliac spine
髂前上棘



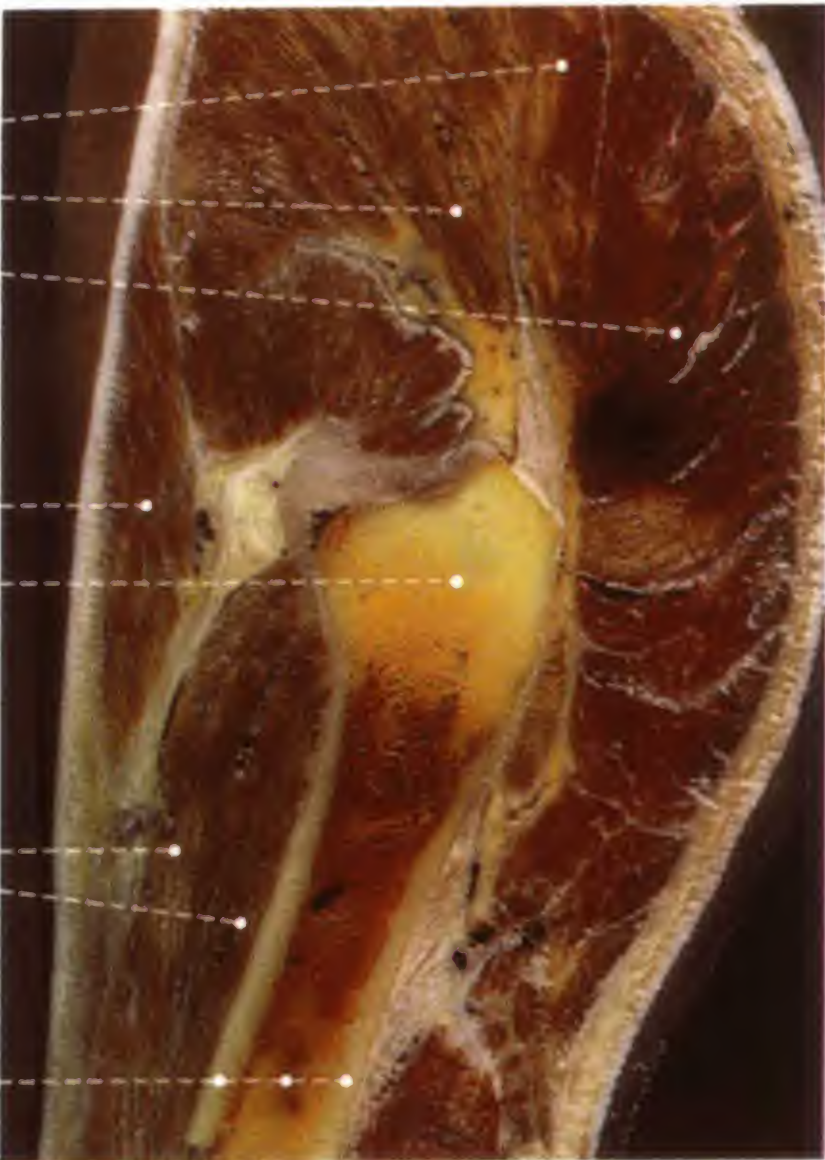
257 Gluteal region and intragluteal injection 臀区和臀区注射

- a The gluteus maximus and medius muscles were divided and retracted. 臀大肌和臀中肌被切除、动脉、神经通过坐骨大孔、梨状肌上方或下方，用箭头表示 (according to von Lanz and Wachsmuth, 1972). Dorsal aspect
- b, c Intragluteal injection according to von Hochstetter (b) and von Lanz and Wachsmuth (c). The injection areas are indicated by red color (20%). Lateral aspect
- b, c 图分别引自 Von Hochstetter 和 Von Lanz 和 Wachsmuth 臀内注射区) 注射区用红色表示，后面观



a

Gluteus medius muscle
臀中肌
Gluteus minimus muscle
臀小肌
Gluteus maximus muscle
臀大肌
Acetabulum
髋臼
Ilium
髌骨
Iliacus muscle
髌肌
Piriformis muscle
梨状肌
Head of femur
股骨头
Sartorius muscle
缝匠肌
Iliopsoas muscle
髌腰肌
Lesser trochanter of femur
股骨小转子
Rectus femoris muscle
股直肌
Adductor magnus muscle
大收肌
Vastus medialis muscle
股内侧肌



b

Gluteus medius muscle
臀中肌
Gluteus minimus muscle
臀小肌
Gluteus maximus muscle
臀大肌
Sartorius muscle
缝匠肌
Greater trochanter of femur
股骨大转子
股四头肌 Quadriceps femoris muscle
股直肌 Rectus femoris muscle –
股中间肌 Vastus intermedius muscle –
Body of femur
股骨体



c

Acetabulum
髋臼
Head of femur
股骨头
Iliopsoas muscle
髌腰肌
Obturator externus muscle
闭孔外肌
Ischial tuberosity
坐骨结节
Pectineus muscle
耻骨肌
Gluteus maximus muscle
臀大肌
Adductor magnus muscle
大收肌
Semitendinosus muscle
半腱肌
Adductor longus muscle
长收肌
Sartorius muscle
缝匠肌
Rectus femoris muscle
股直肌
Semitendinosus muscle
半腱肌
Semimembranosus muscle
半膜肌
Sartorius muscle
缝匠肌
Vastus medialis muscle
股内侧肌

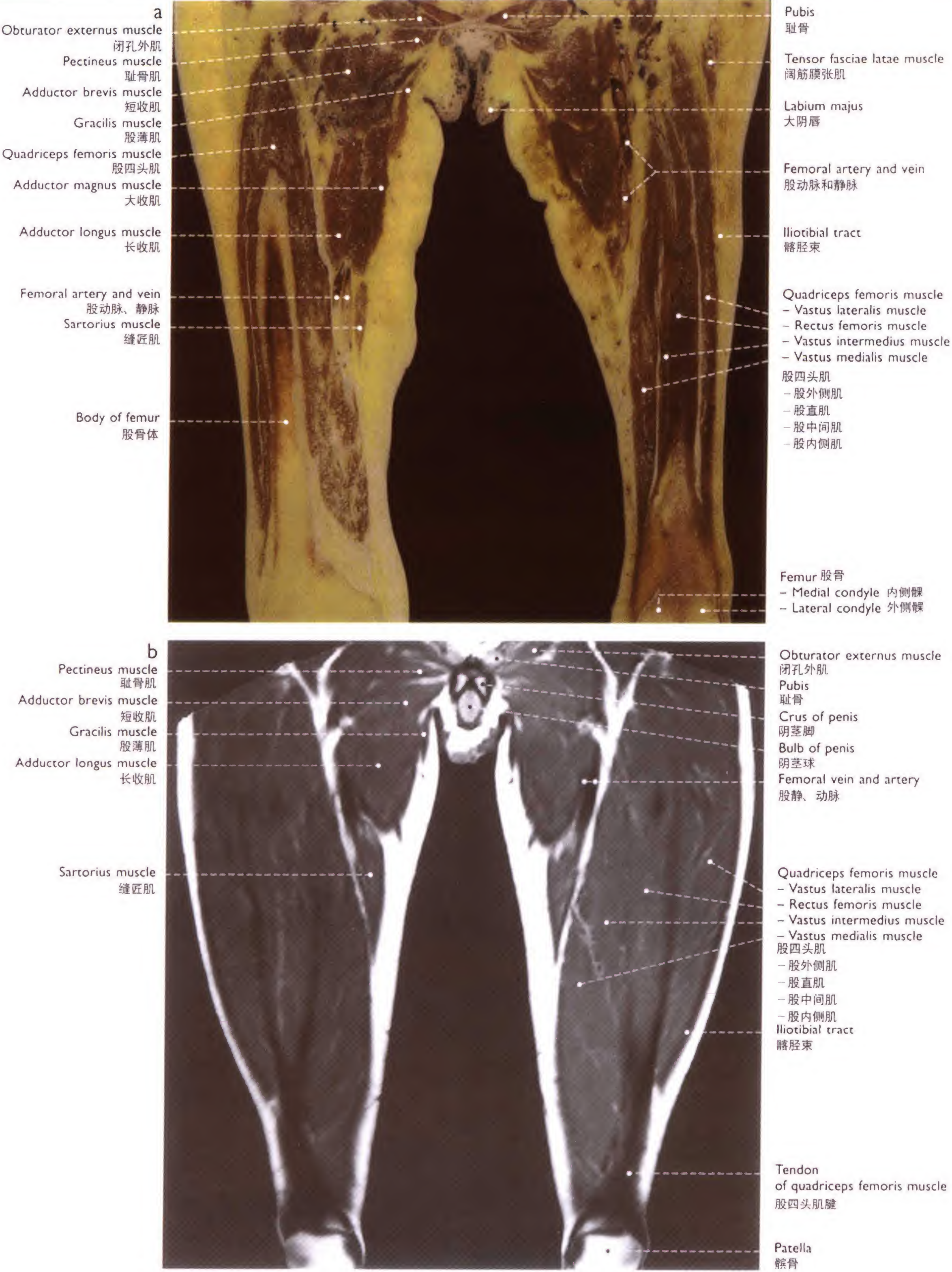


d

Sartorius muscle
缝匠肌
Greater trochanter of femur
股骨大转子
股四头肌 Quadriceps femoris muscle
股直肌 Rectus femoris muscle –
股中间肌 Vastus intermedius muscle –
Gluteus maximus muscle
臀大肌
Body of femur
股骨体
Adductor magnus muscle
大收肌
Long head
of biceps femoris muscle
股二头肌长头
Tendon
of quadriceps femoris muscle
股四头肌腱

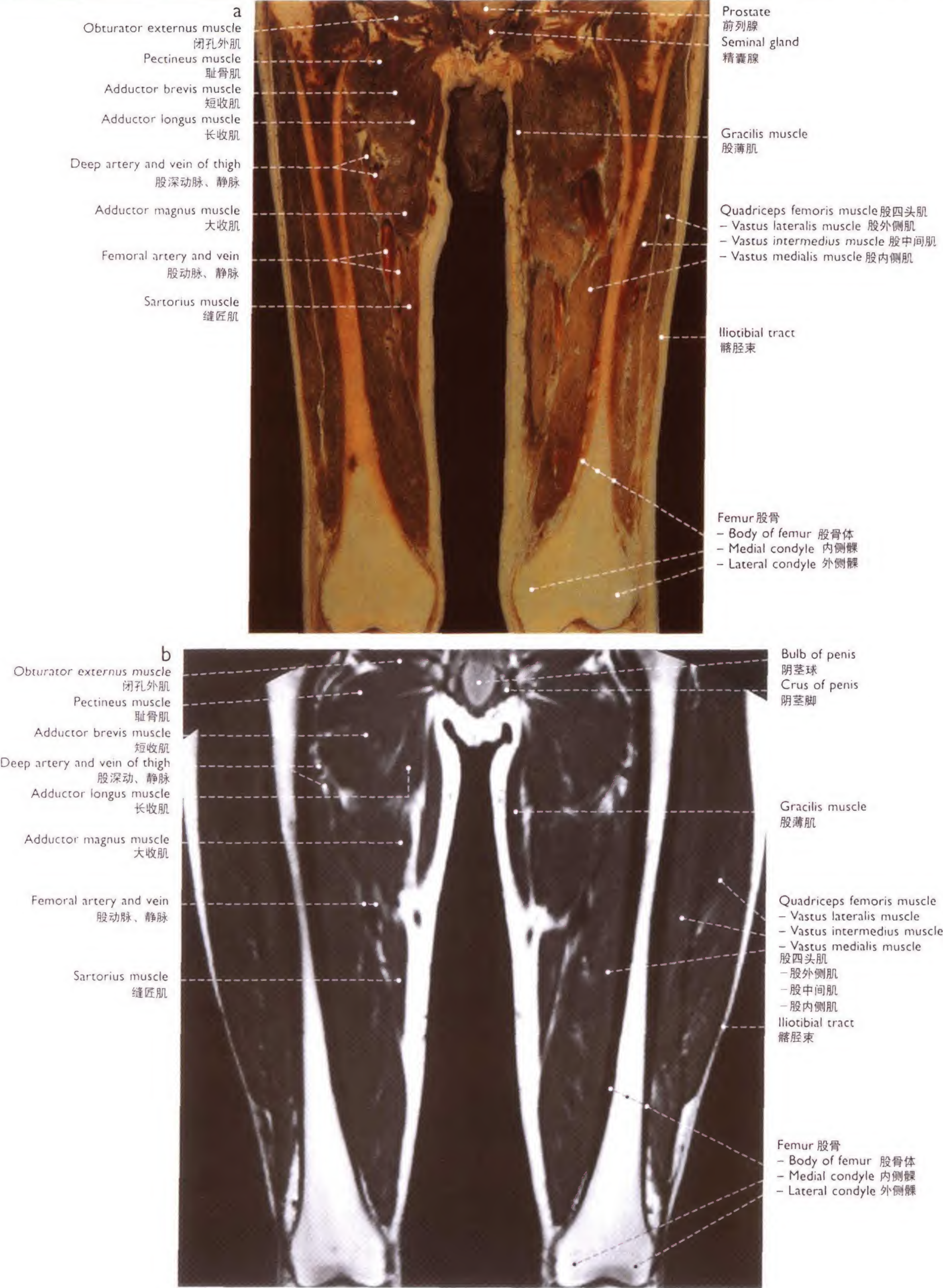
258 Thigh (30%) 股

a–d Sagittal sections through the head of femur (a, c) and, more laterally, 通过股骨头(a,c), 外侧通过股骨
through the greater trochanter and the body of femur (b, d) 大转子和股骨头体(b,d)矢状面
a, b Anatomical sections 解剖断面
c, d Magnetic resonance images (MRI, T₁-weighted) 磁共振图像(MRI,T₁加权)



259 Thigh (20%) 股

- a, b Coronal sections through the ventral parts of the thighs, 通过股前部冠状切面
ventral aspect 前面观
a Anatomical section of a female 女性解剖断面
b Magnetic resonance image (MRI, T₁-weighted) of a male 男性磁共振图像(MRI, T₁加权)

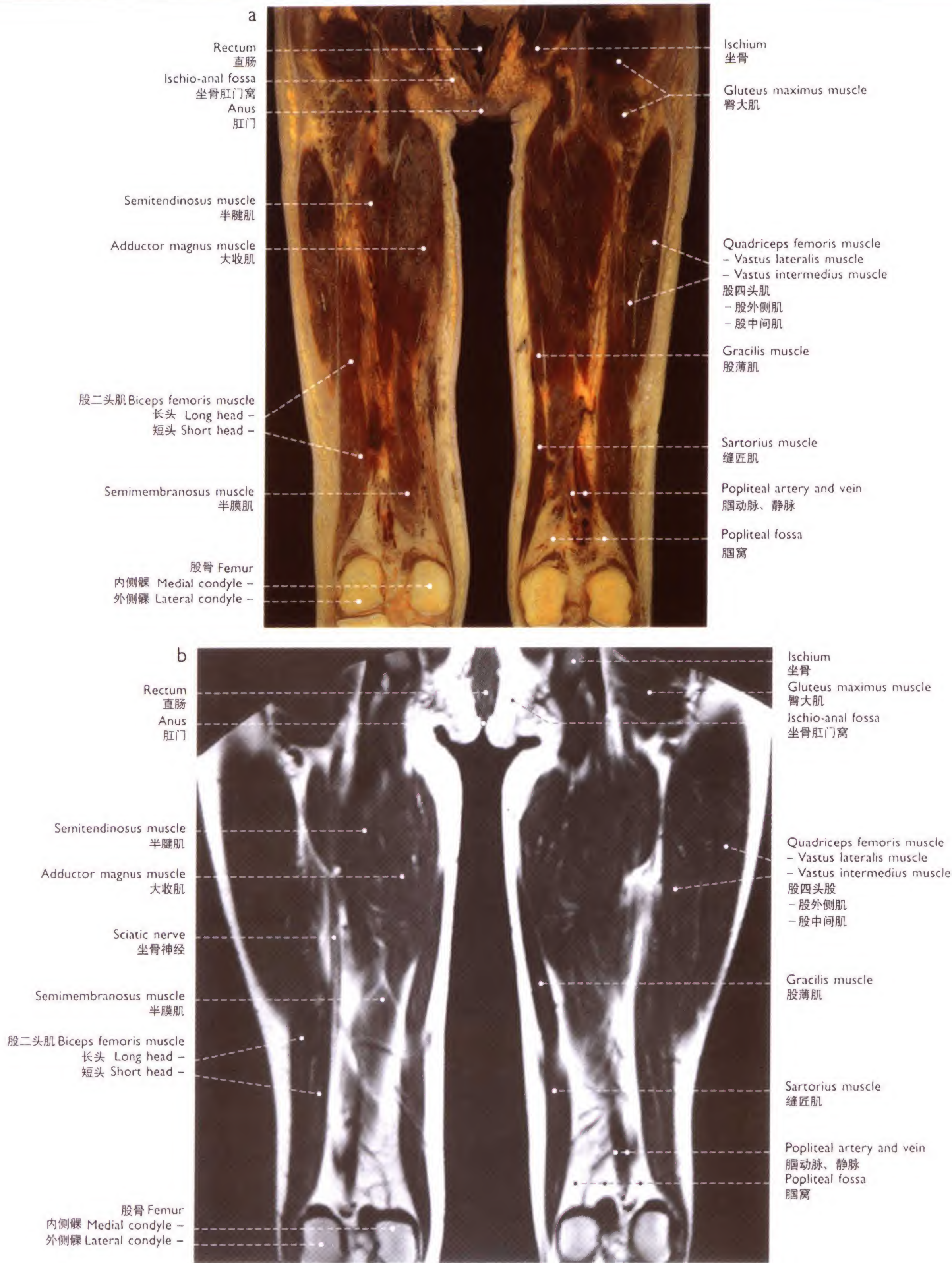


260 Thigh (20%) 股部

a, b Coronal sections through the middle parts of the thighs of a male, ventral aspect 经男性股中部冠状面、前面观

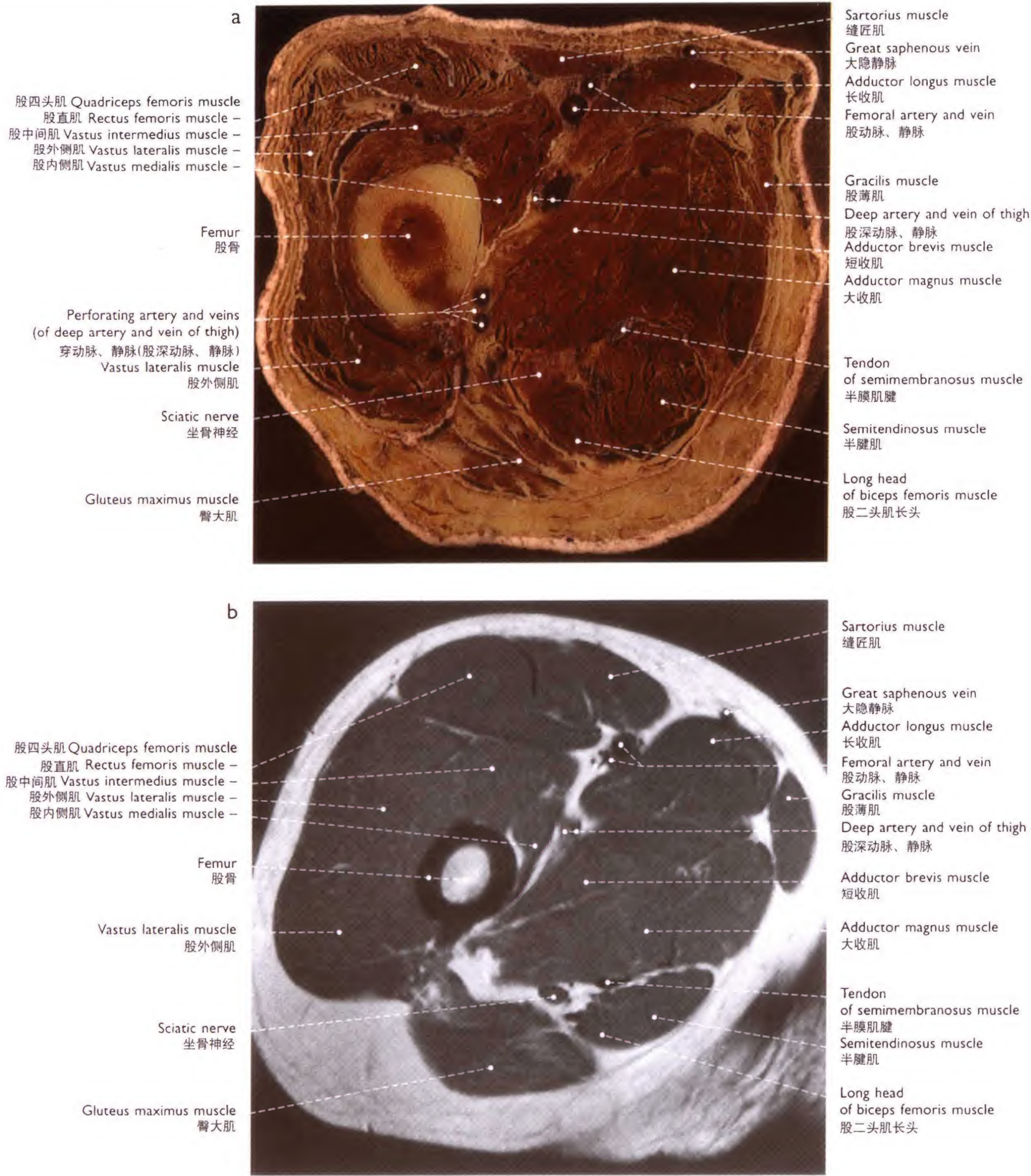
a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)



261 Thigh (20%) 股部

- a, b Coronal sections through the dorsal parts of the thighs of a male, ventral aspect 经男性股后部冠状面，前面观
- a Anatomical section 解剖断面
- b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)

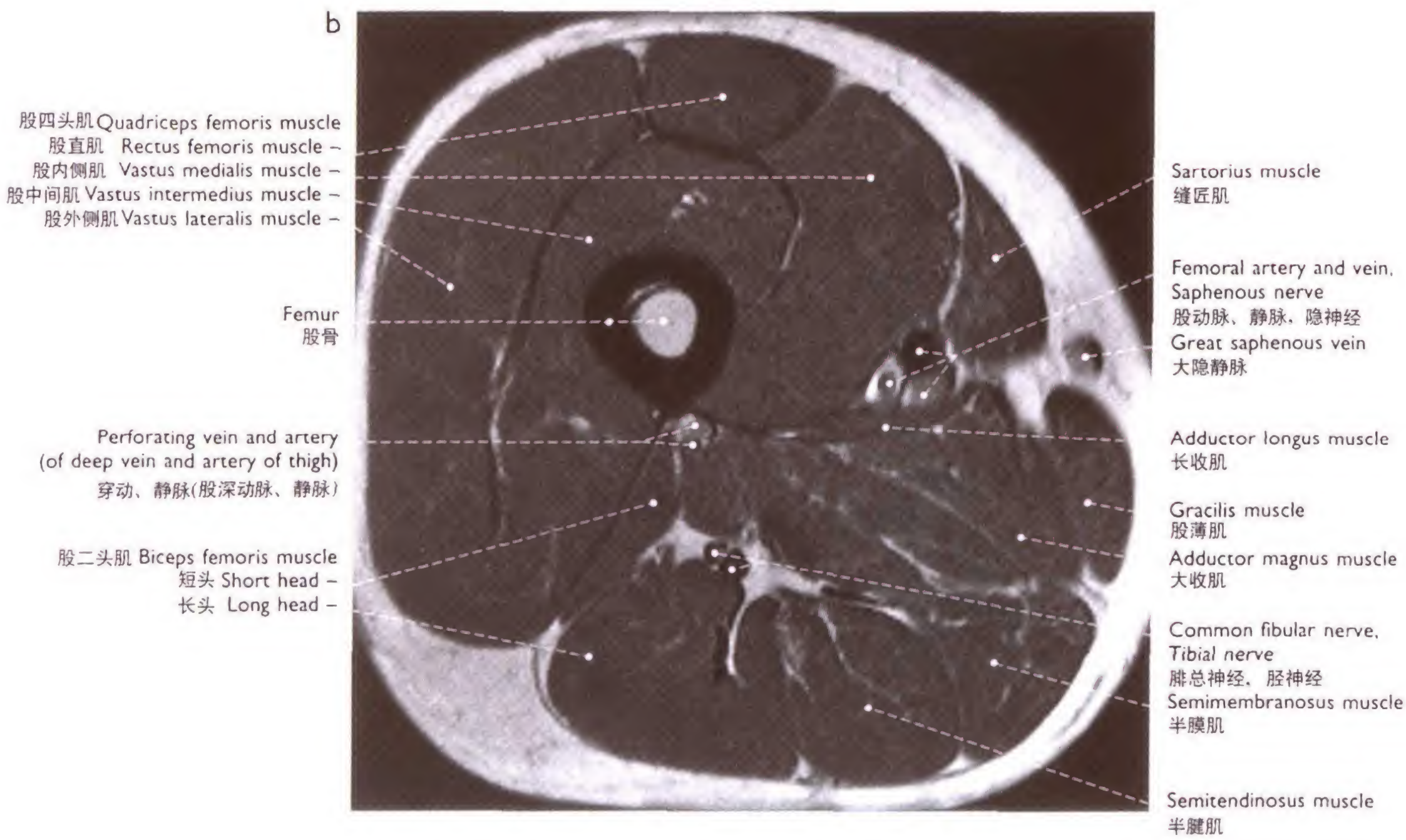
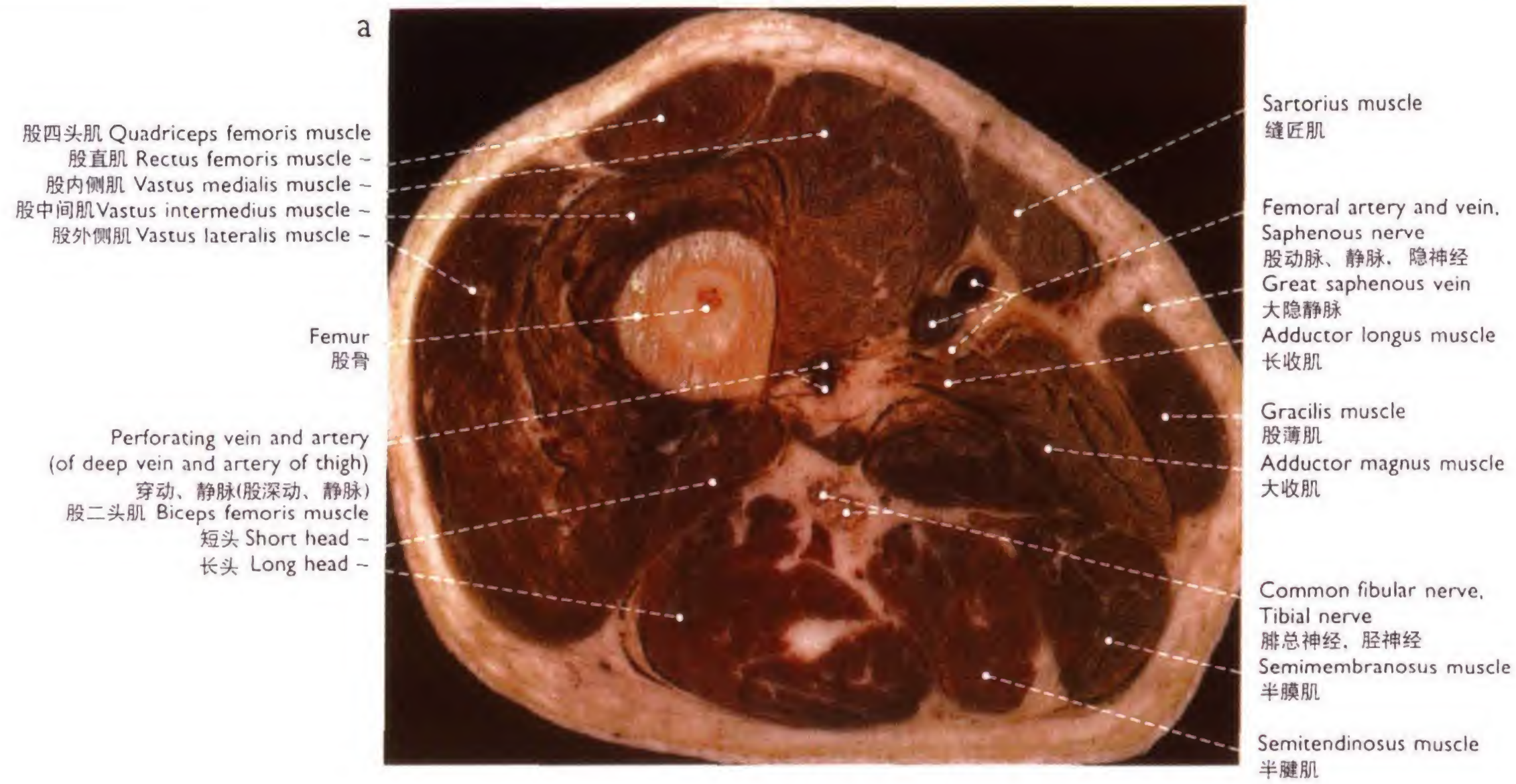


262 Right thigh (50%) 右股部

Transverse sections through the proximal thigh at the transition from the gluteal to the femoral region, inferior (distal) aspect 横断面，下面观

a Anatomical section 解剖断面

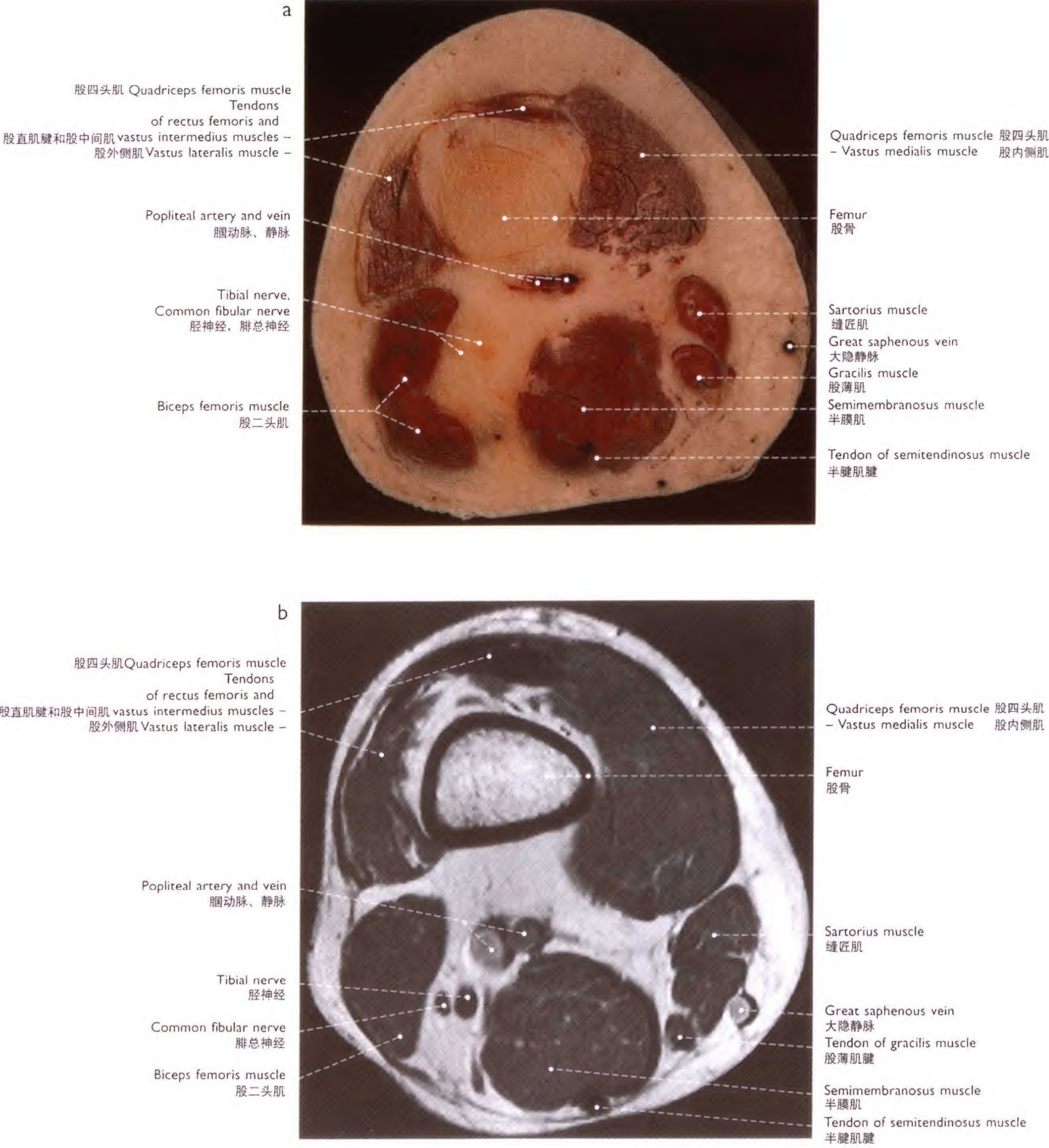
b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)



263 Right thigh (60%) 右股部

Transverse sections through the proximal third of the thigh,
inferior (distal) aspect 经股部上三分之一横断面、下面观

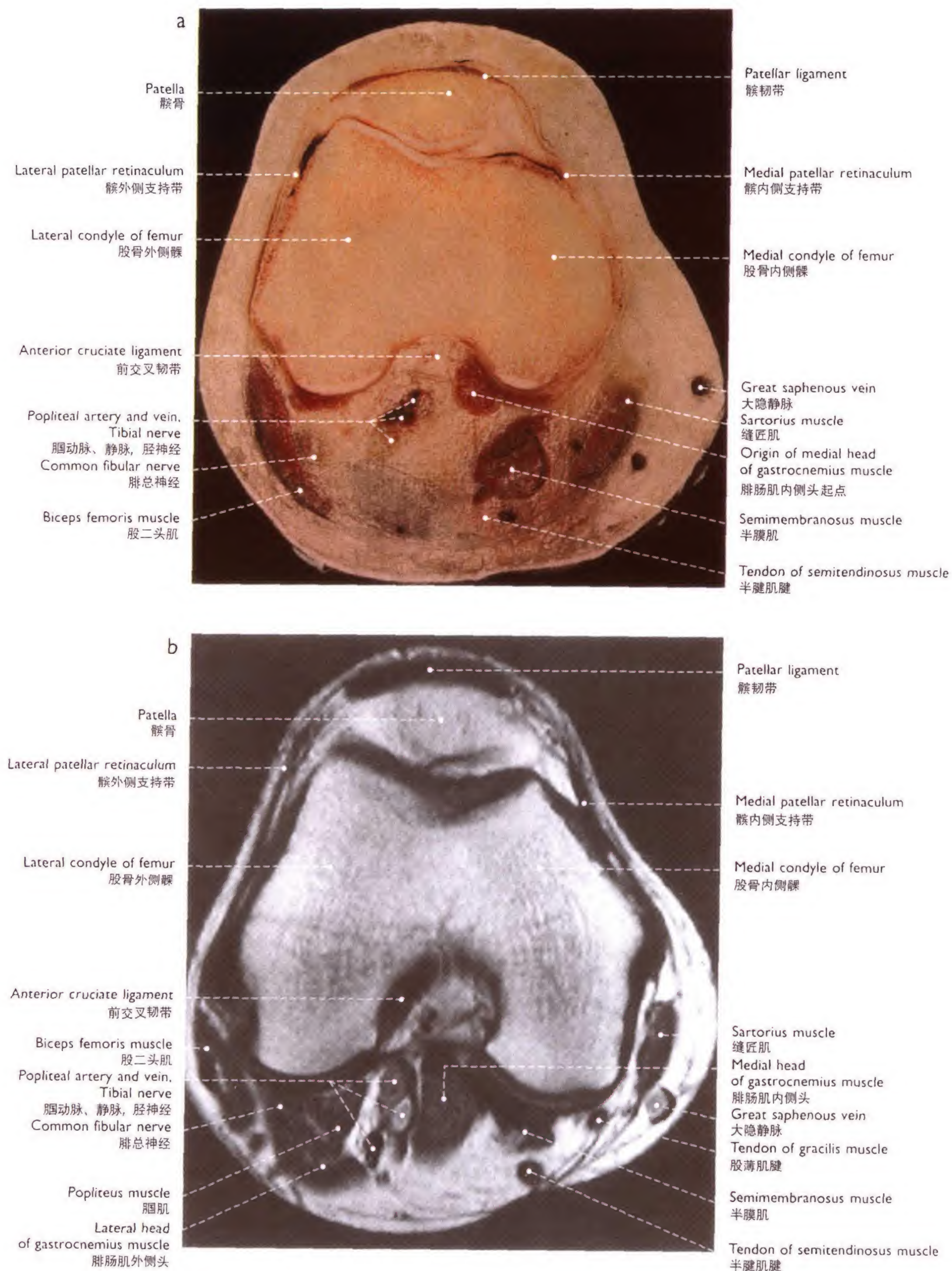
- a Anatomical section 解剖断面
b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(T₁加权)



264 Right thigh (60%) 右股部

Transverse sections through the distal third of the thigh,
inferior (distal) aspect 经肌部三分之一横断面，下面观

- a Anatomical section 解剖断面
b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)

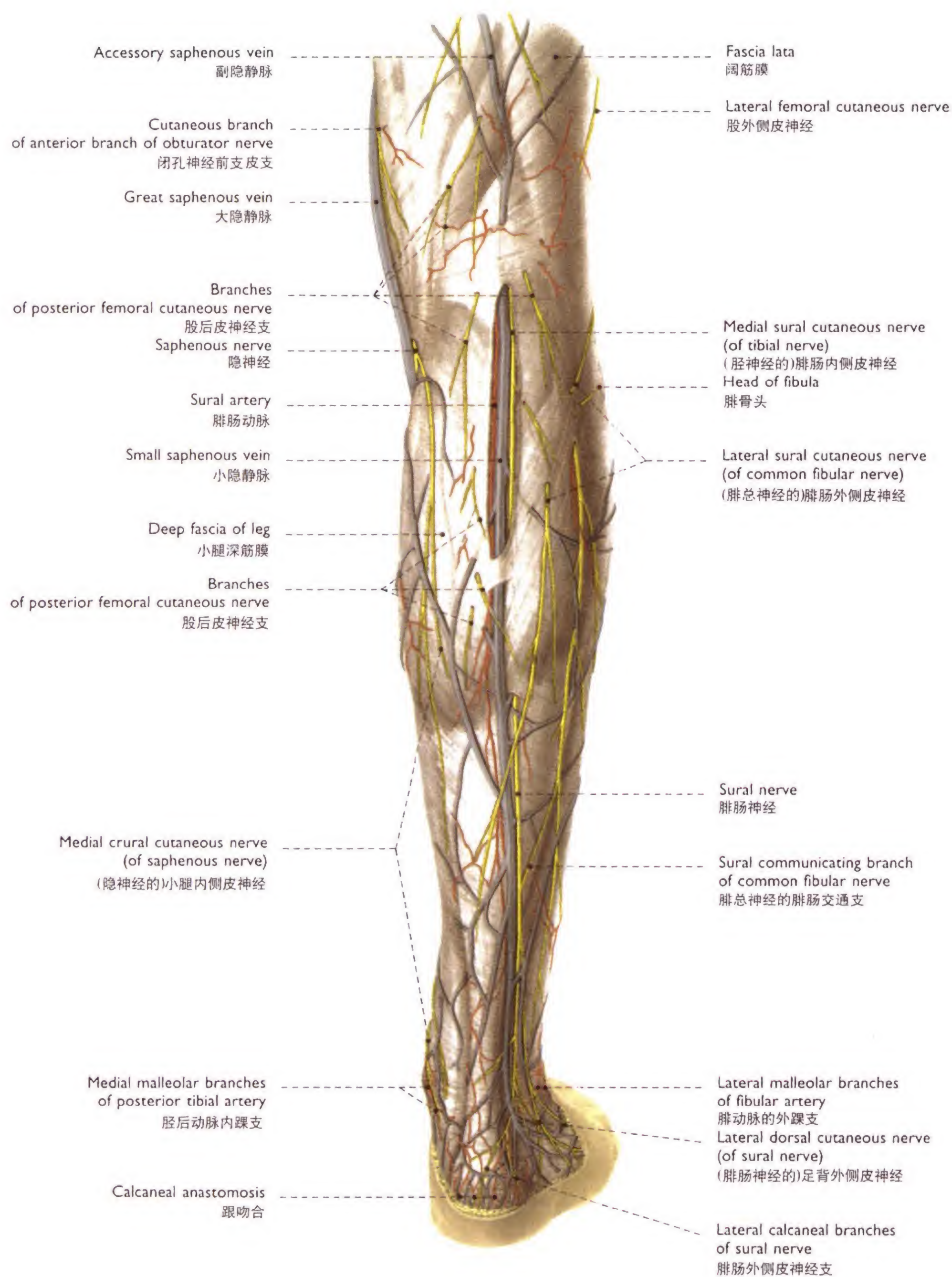


265 Right thigh (60%) 右股部

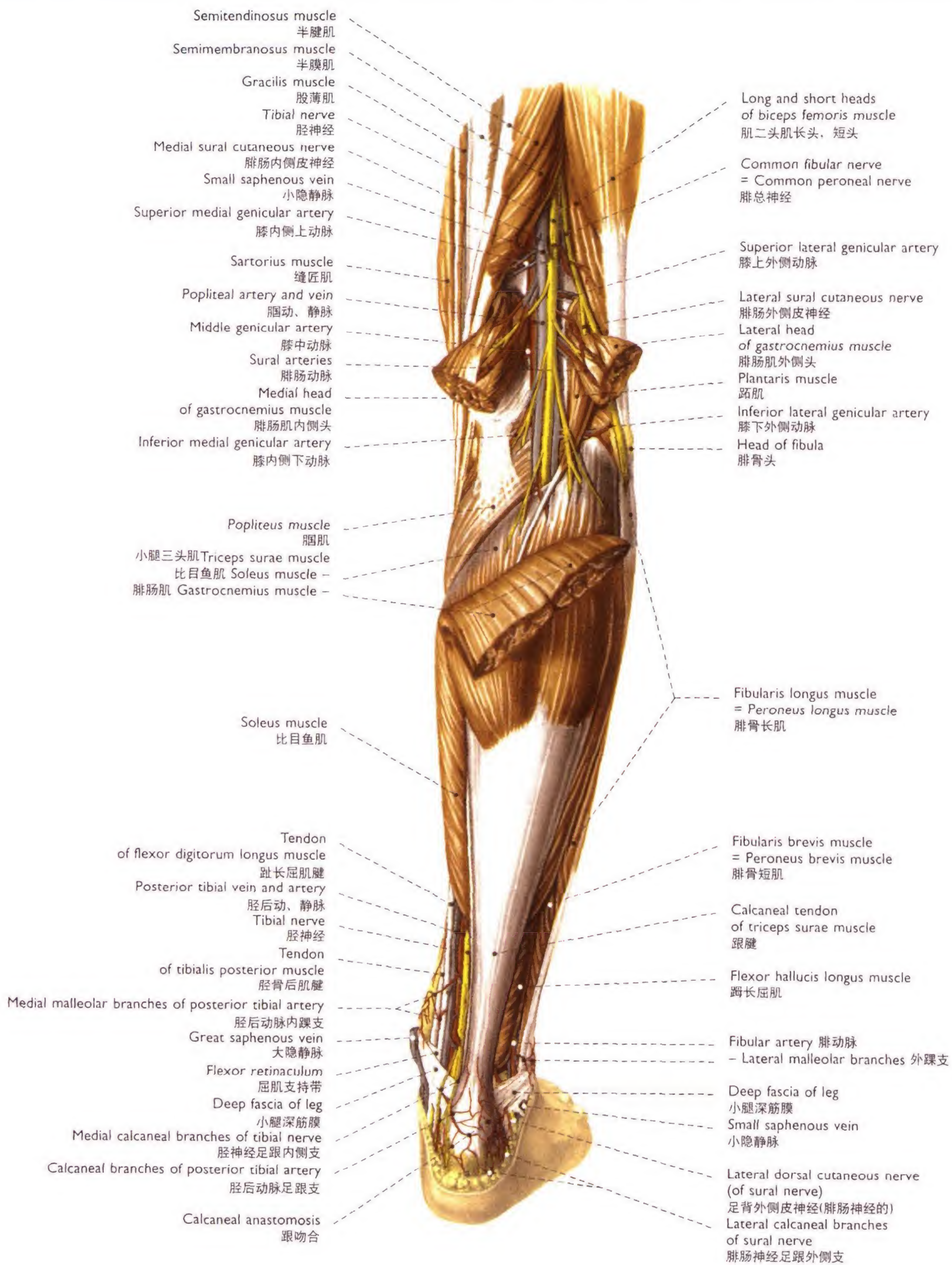
Transverse sections through the proximal parts of the knee joint.
inferior (distal) aspect 近膝关节上部横断面, 下面观

a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)

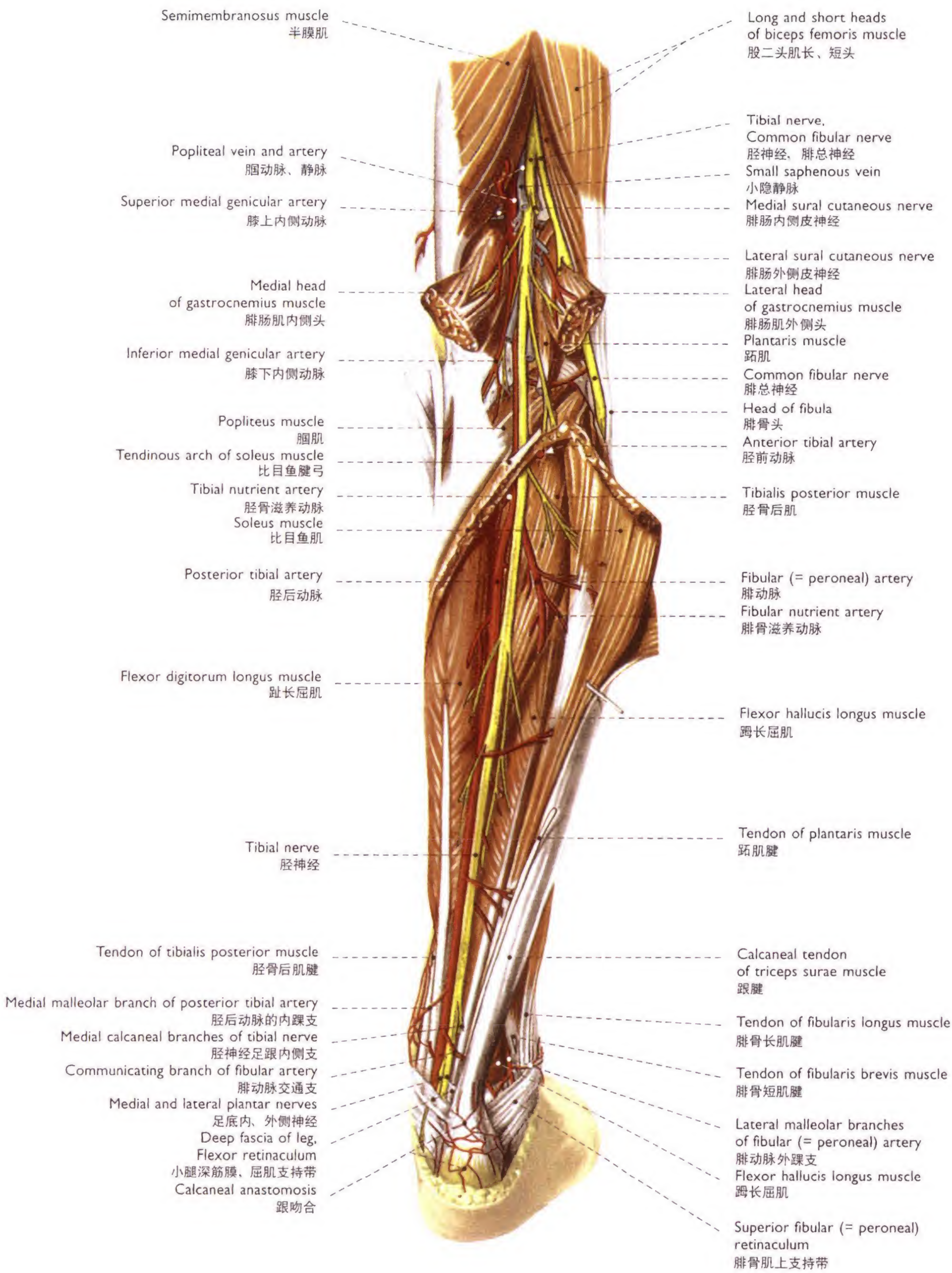


266 Subcutaneous blood vessels and nerves of the popliteal fossa and the leg of the right side (30%) 腓窝和小腿皮下血管和神经
Dorsal aspect 后面观



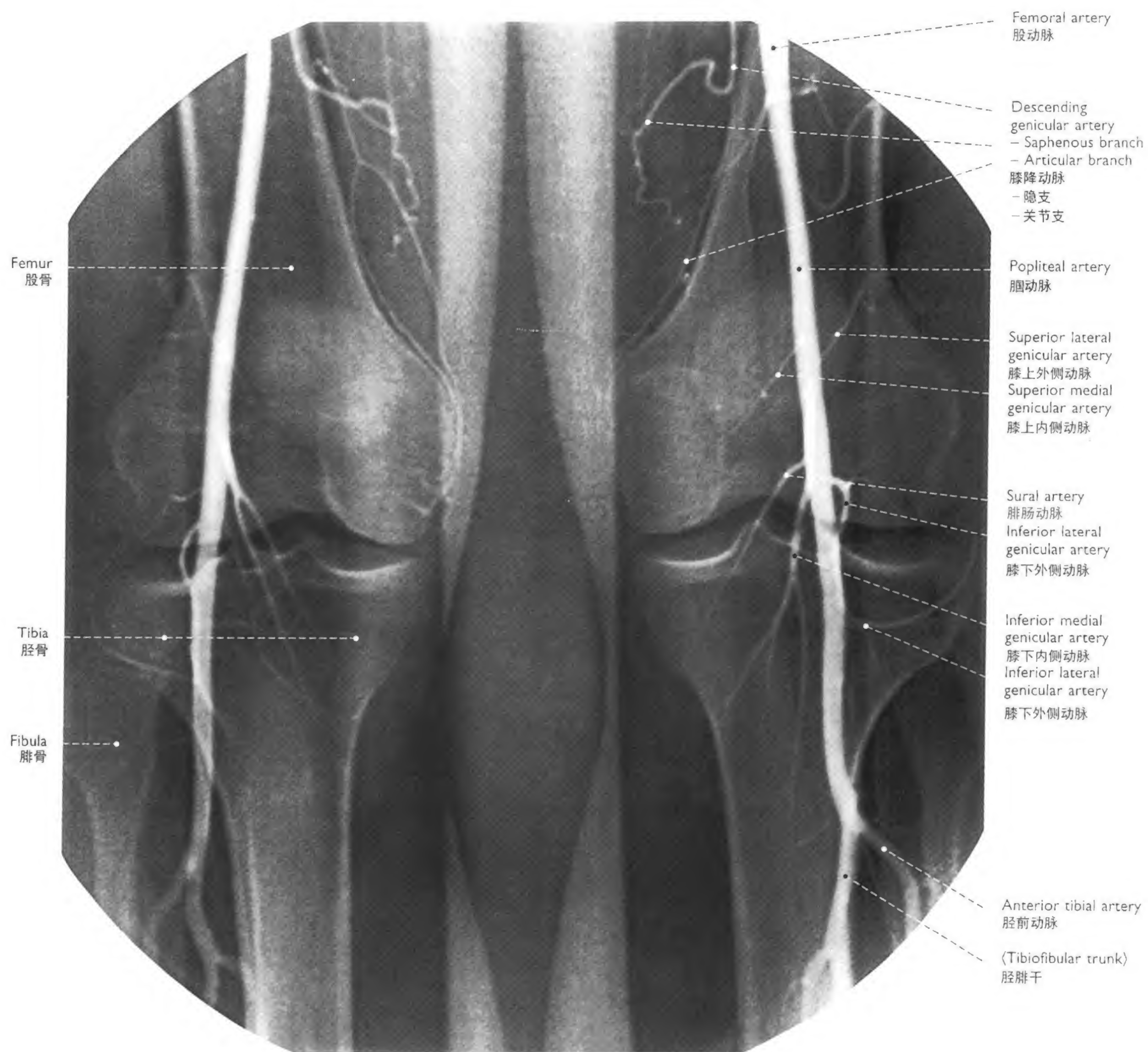
267 Blood vessels and nerves
of the popliteal fossa and the leg
of the right side (30%) 腘窝和小腿的血管和神经

The gastrocnemius muscle was divided. Dorsal aspect 腓肠肌被切除, 后面观



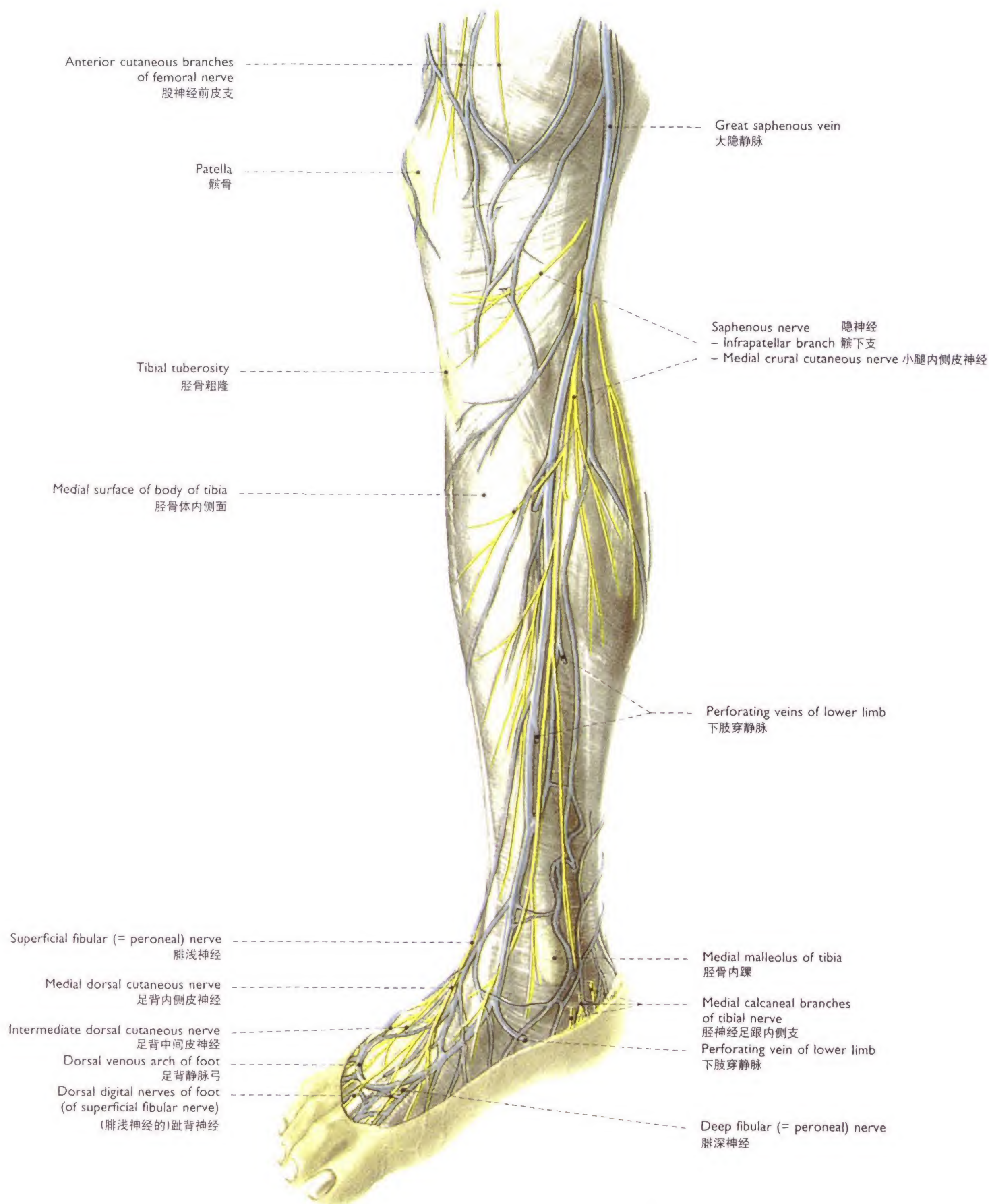
268 Blood vessels and nerves of the popliteal fossa and the leg of the right side (30%) 右小腿和腘窝的血管神经

The gastrocnemius and soleus muscles were divided, the deep veins removed. Dorsal aspect 比目鱼肌和腓肠肌被分离，深静脉被切除。后面观



269 Arteries of the lower limb (60%) 下肢动脉

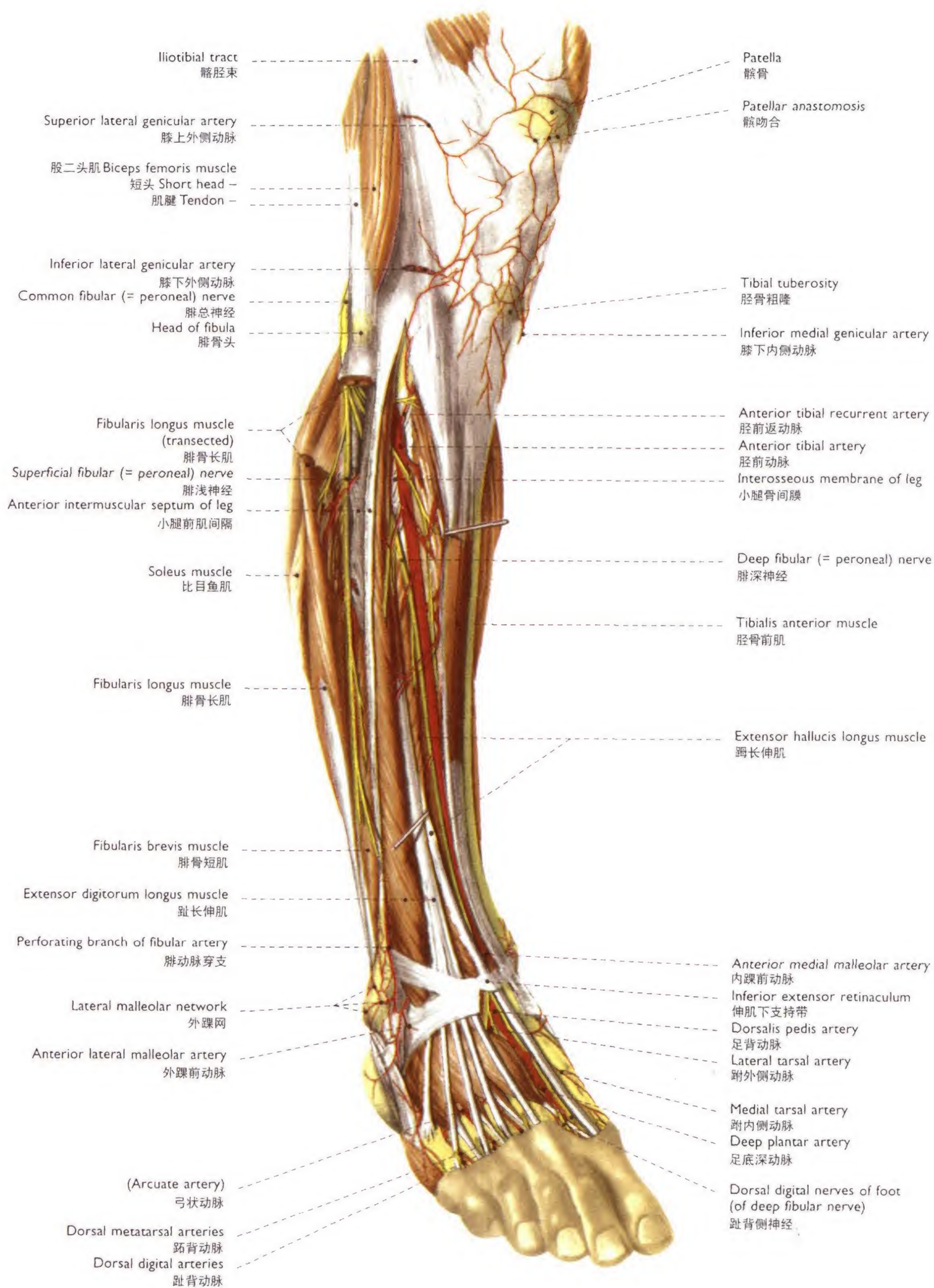
Anteroposterior arteriogram of the femoral, popliteal and tibial arteries 股、腘和胫动脉后前位动脉造影图



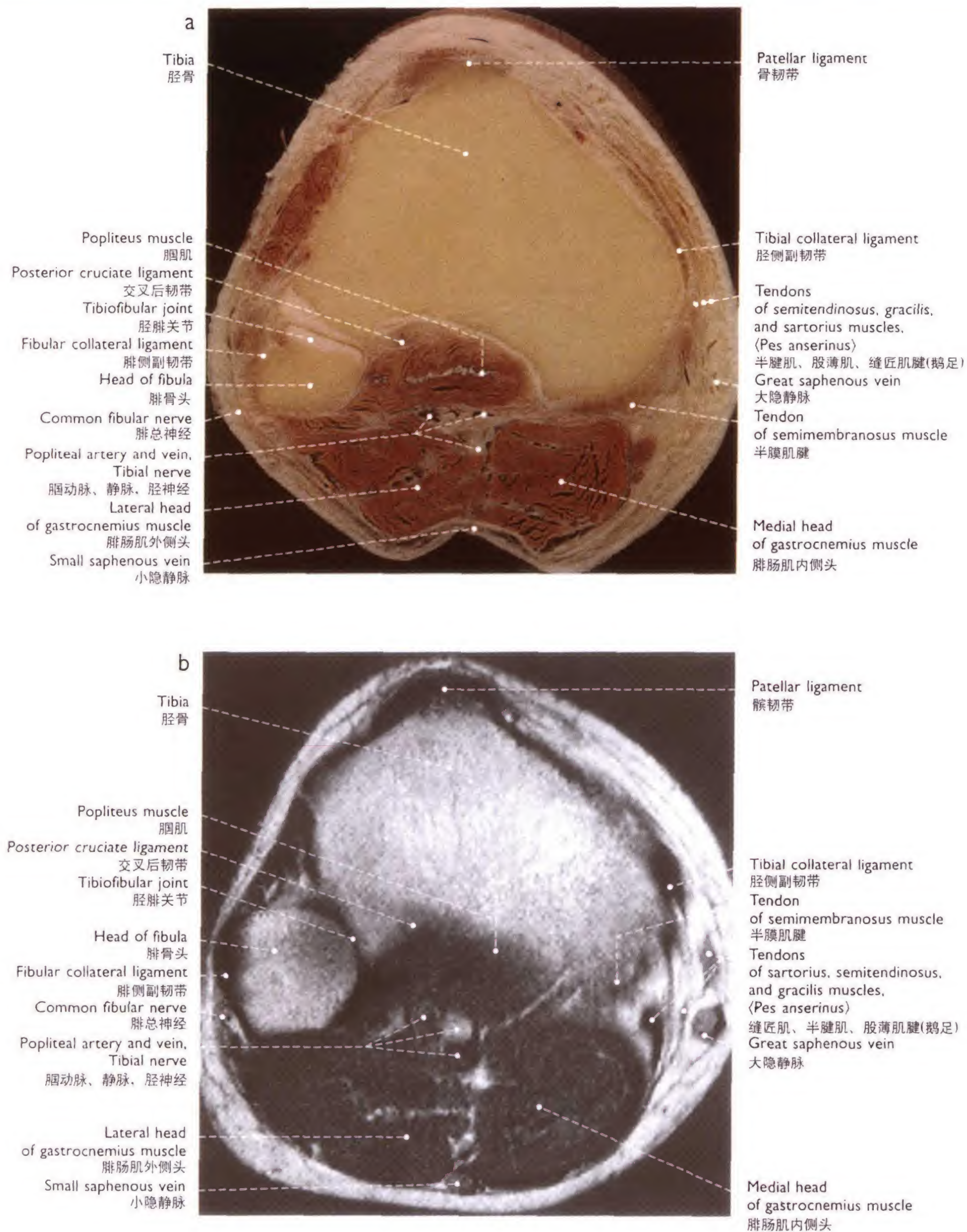
270 Subcutaneous veins and nerves

of the right leg and foot (30%) 右小腿和足的浅静脉、皮神经

Ventromedial aspect 前内侧面观



271 Arteries and nerves of the right leg and foot (30%) 右小腿、足的动脉、神经
The deep veins were removed. Ventrolateral aspect 深静脉被去除，前外侧面观

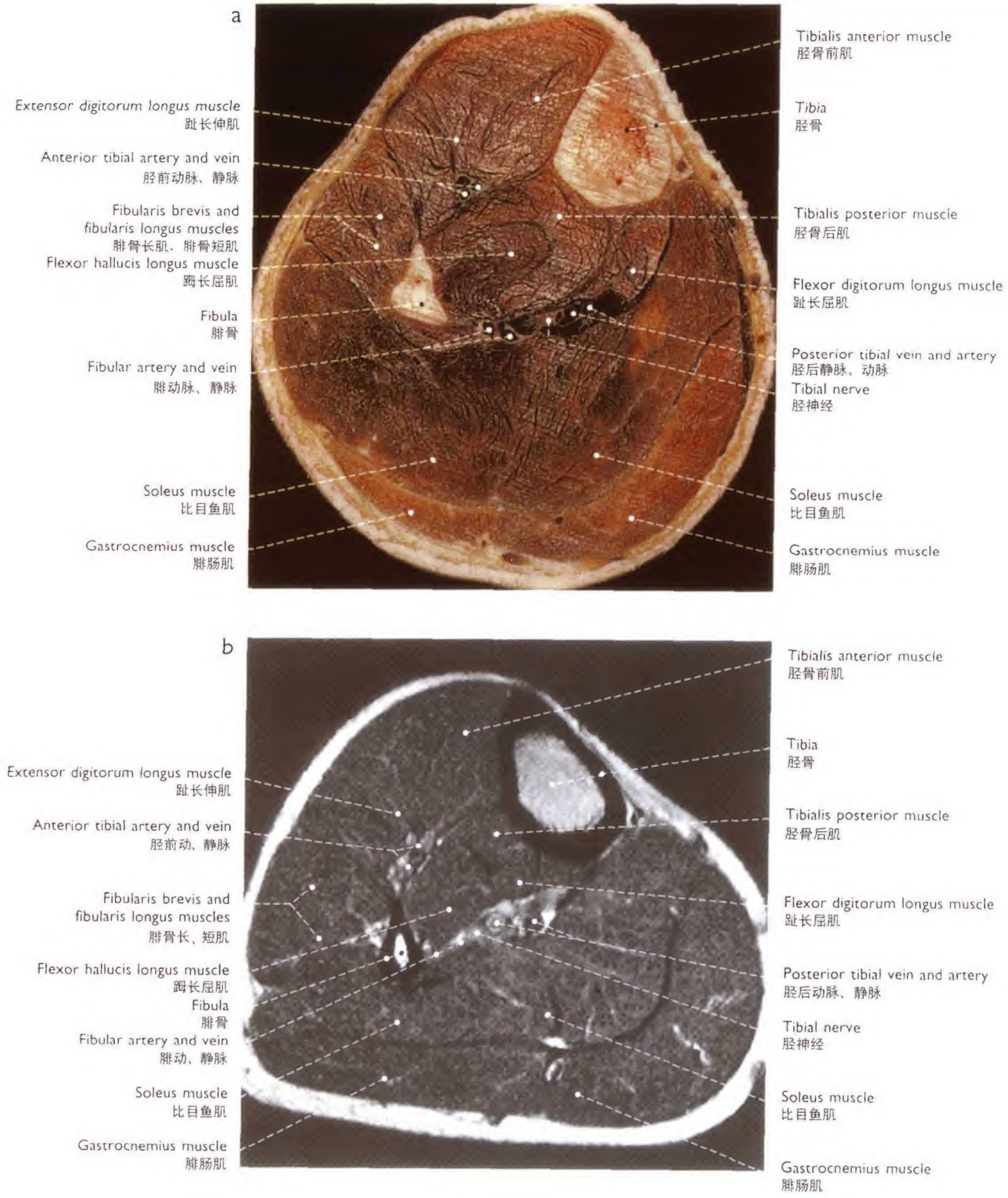


272 Right leg (70%) 右小腿

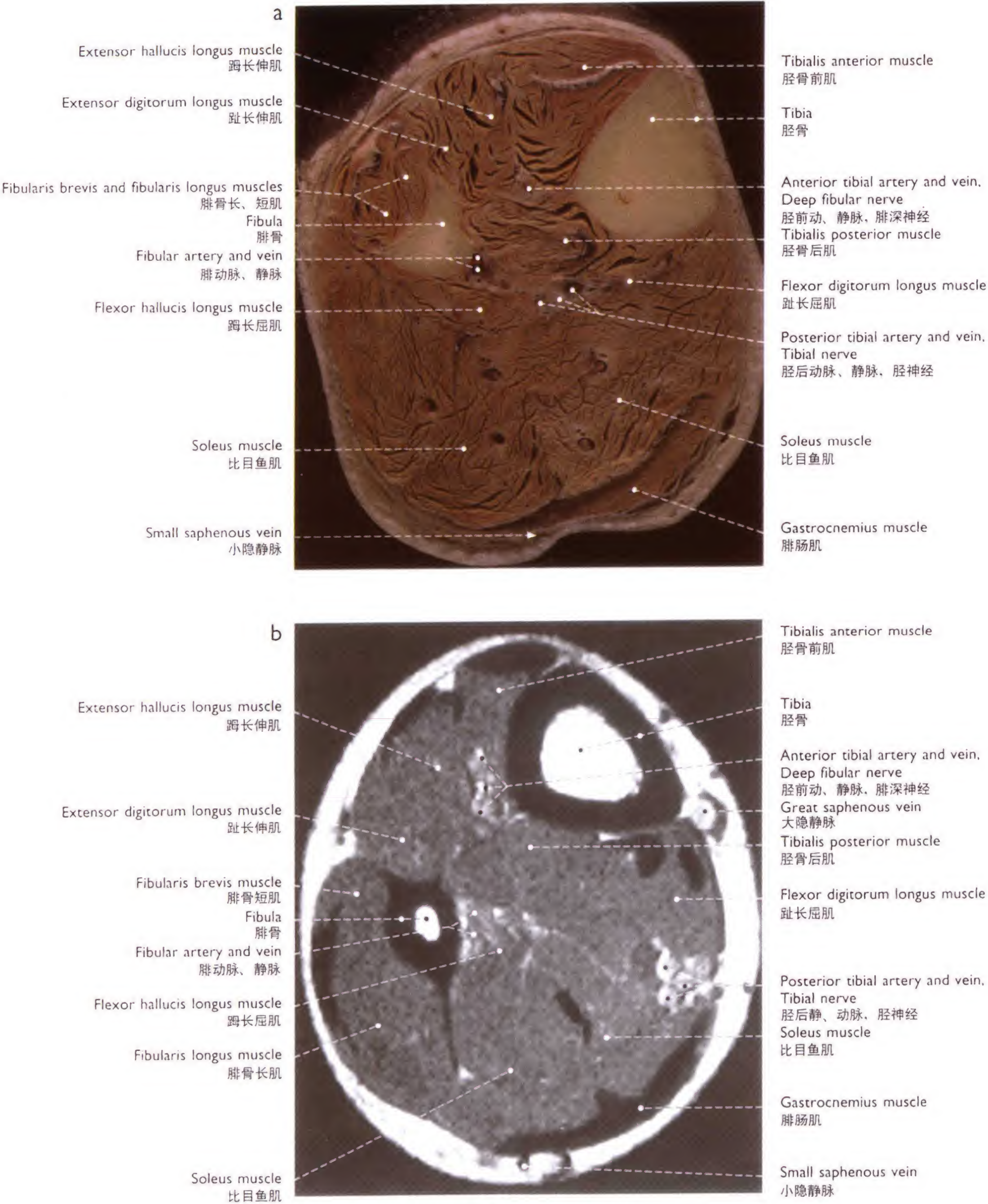
Transverse sections through the proximal leg at the level of the superior tibiofibular joint, inferior (distal) aspect 经小腿上端胫腓关节上部横断面, 下(远侧)面观

a Anatomical section 解剖断面

b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)



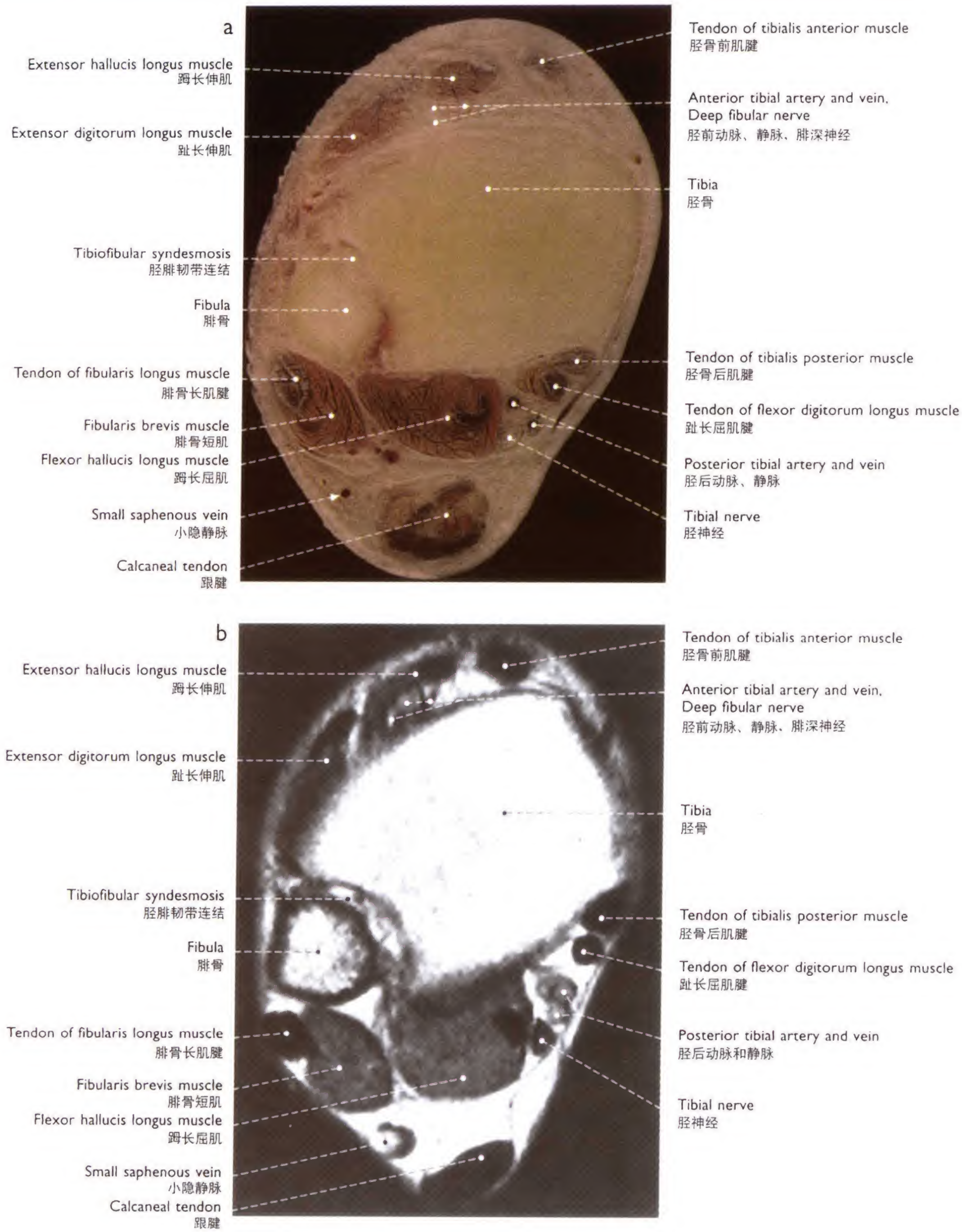
273 Right leg (70%) 右小腿
Transverse sections through the proximal third of the leg,
inferior (distal) aspect 右小腿上三分之一处横断面、下(远侧)面观
a Anatomical section 解剖断面
b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)



274 Right leg (75%) 右小腿

Transverse sections through the middle third of the leg, inferior (distal) aspect 经小腿中三分之一处横断面、下(远侧)面观

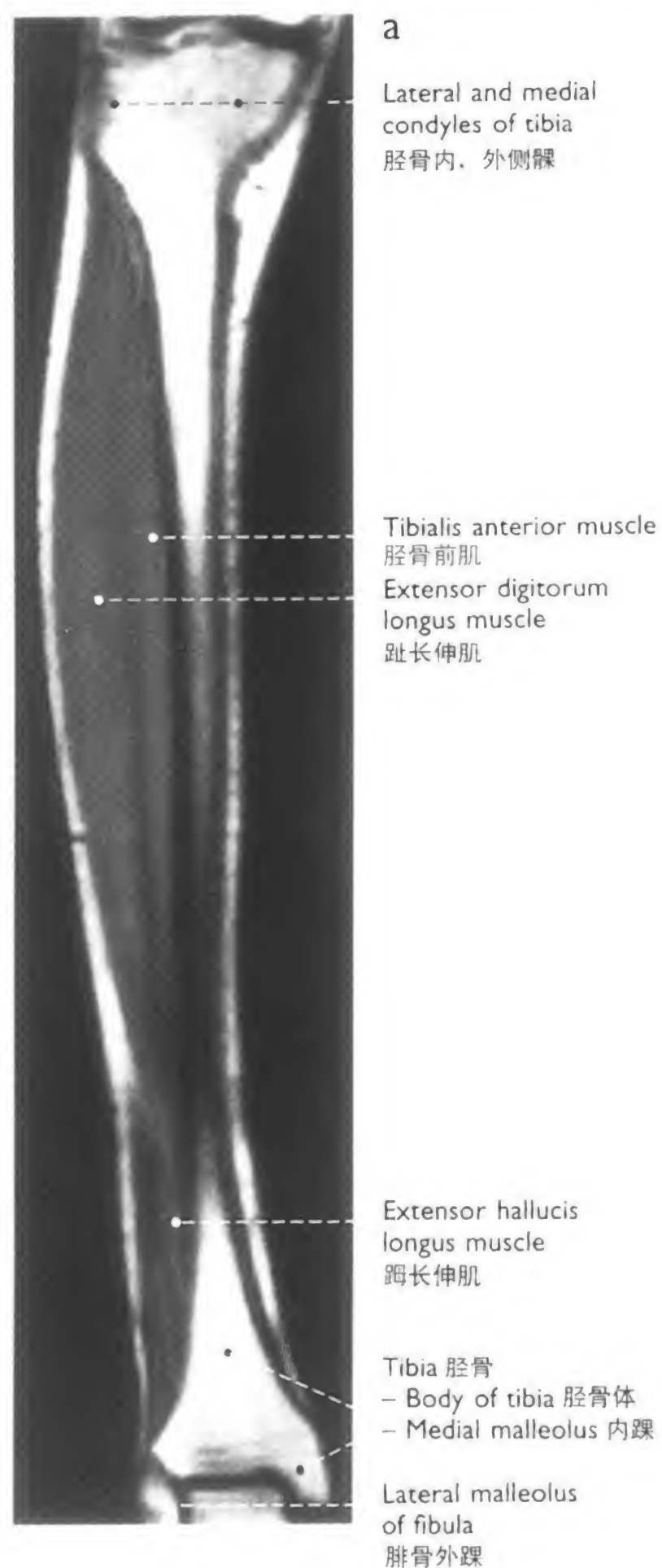
- a Anatomical section 解剖断面
- b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)



275 Right leg (75%) 右小腿

Transverse sections through the distal leg at the level of the inferior tibiofibular joint (= tibiofibular syndesmosis), inferior (distal) aspect 经小腿下端胫腓关节处横断面，下(远侧)面观

- a Anatomical section 解剖断面
- b Magnetic resonance image (MRI, T₁-weighted) 磁共振图像(MRI, T₁加权)



276 Right leg (30%) 右小腿

- a-c Coronal magnetic resonance images (MRI, T₁-weighted) through the 冠状位磁共振图像(MRI, T₁加权)
- a ventral part 小腿前部
- b middle part 小腿中部
- c dorsal part of the leg, ventral aspect 小腿后部、前面观



a

Femur 股骨
- Lateral condyle 外侧髁
- Medial condyle 内侧髁

Tibia 胫骨
- Medial condyle 内侧髁
- Lateral condyle 外侧髁

Triceps surae muscle
- Medial head
of gastrocnemius m.
- Soleus muscle

小腿三头肌
- 腓肠肌内侧头
- 比目鱼肌

Tibialis anterior muscle
胫骨前肌

Extensor digitorum
longus muscle
趾长伸肌

Flexor digitorum
longus muscle
趾长屈肌

Body of tibia
胫骨体

Extensor hallucis
longus muscle
拇长伸肌

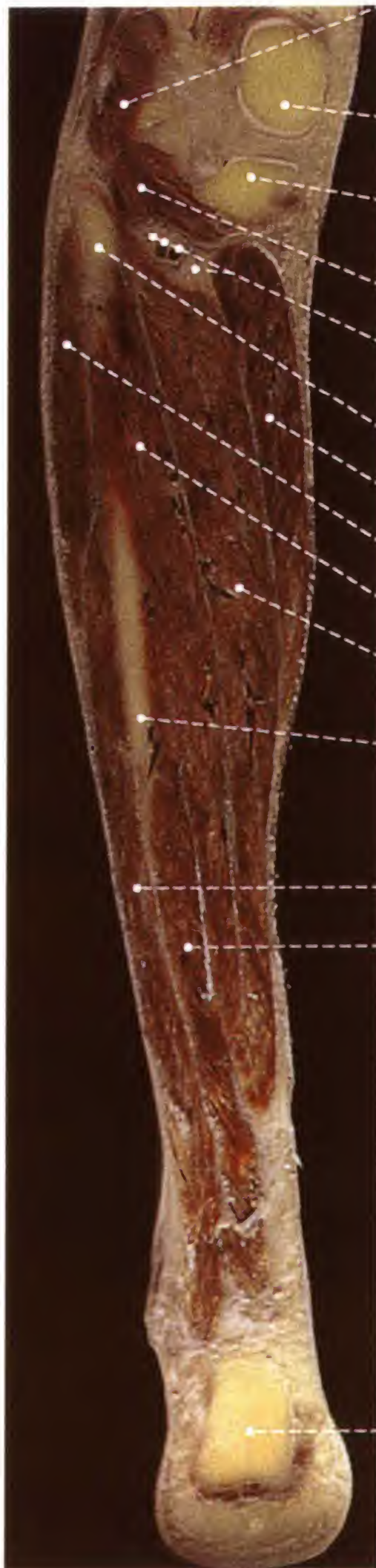
Flexor hallucis
longus muscle
拇长屈肌

Tibia
胫骨
Lateral malleolus
of fibula
腓骨外踝

Talus
距骨
Calcaneus
跟骨

Abductor hallucis
muscle
拇展肌

Tendons
of fibularis brevis
and fibularis longus
muscles
腓骨长、短肌腱



b

Lateral head
of gastrocnemius muscle
腓肠肌外侧头

Medial condyle
of femur
股骨内侧髁

Medial condyle
of tibia
胫骨内侧髁

Popliteus muscle
腘肌

Posterior tibial a., vv.,
Tibial nerve

胫后动、静脉, 胫神经
Head of fibula
腓骨头

Soleus muscle
比目鱼肌

Fibularis longus m.
腓骨长肌

Tibialis posterior m.
胫骨后肌

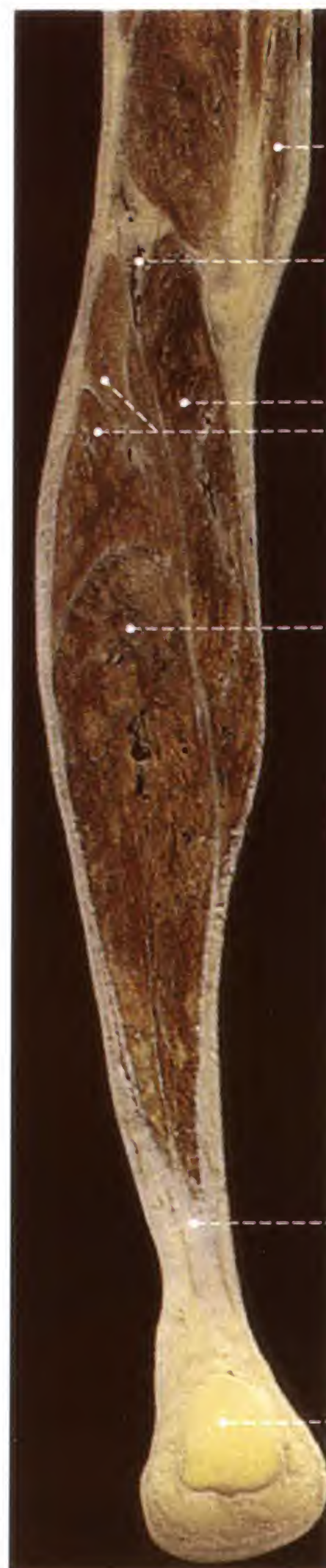
Flexor digitorum
longus muscle
趾长屈肌

Body of fibula
腓骨体

Fibularis brevis muscle
腓骨短肌

Flexor hallucis longus
muscle
拇长屈肌

Calcaneus
跟骨



c

Sartorius muscle
缝匠肌

Small saphenous vein
小隐静脉

Gastrocnemius muscle
- Medial head
- Lateral head
腓肠肌
- 内侧头
- 外侧头

Soleus muscle
比目鱼肌

Calcaneal tendon
of triceps surae muscle
跟腱

Calcaneus
跟骨

277 Right leg (30%) 右小腿

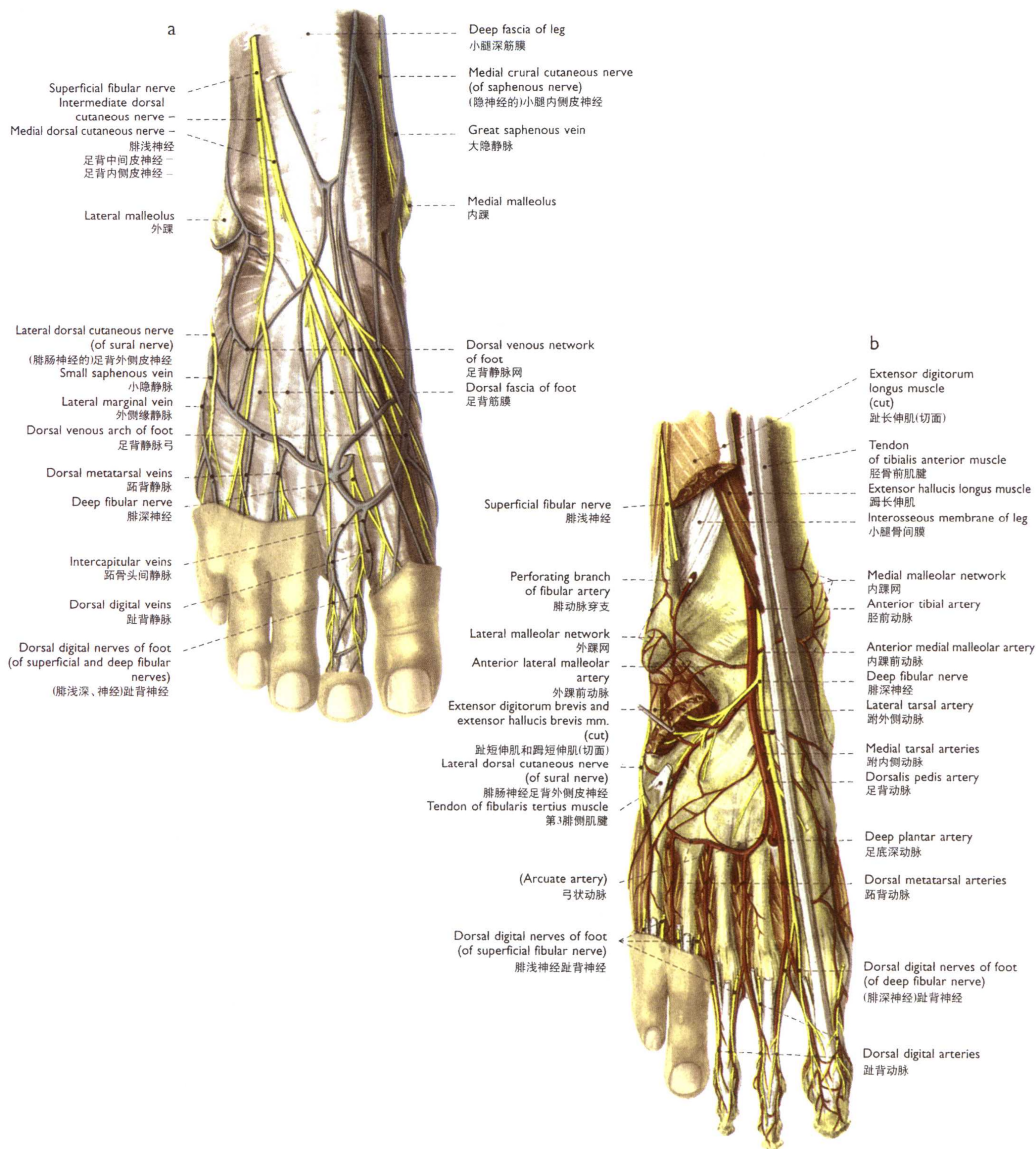
a-c Coronal anatomical sections
through the 冠状解剖面

a ventral part 小腿前部

b middle part 小腿中部

c dorsal part

of the leg, ventral aspect 小腿后部, 前面观

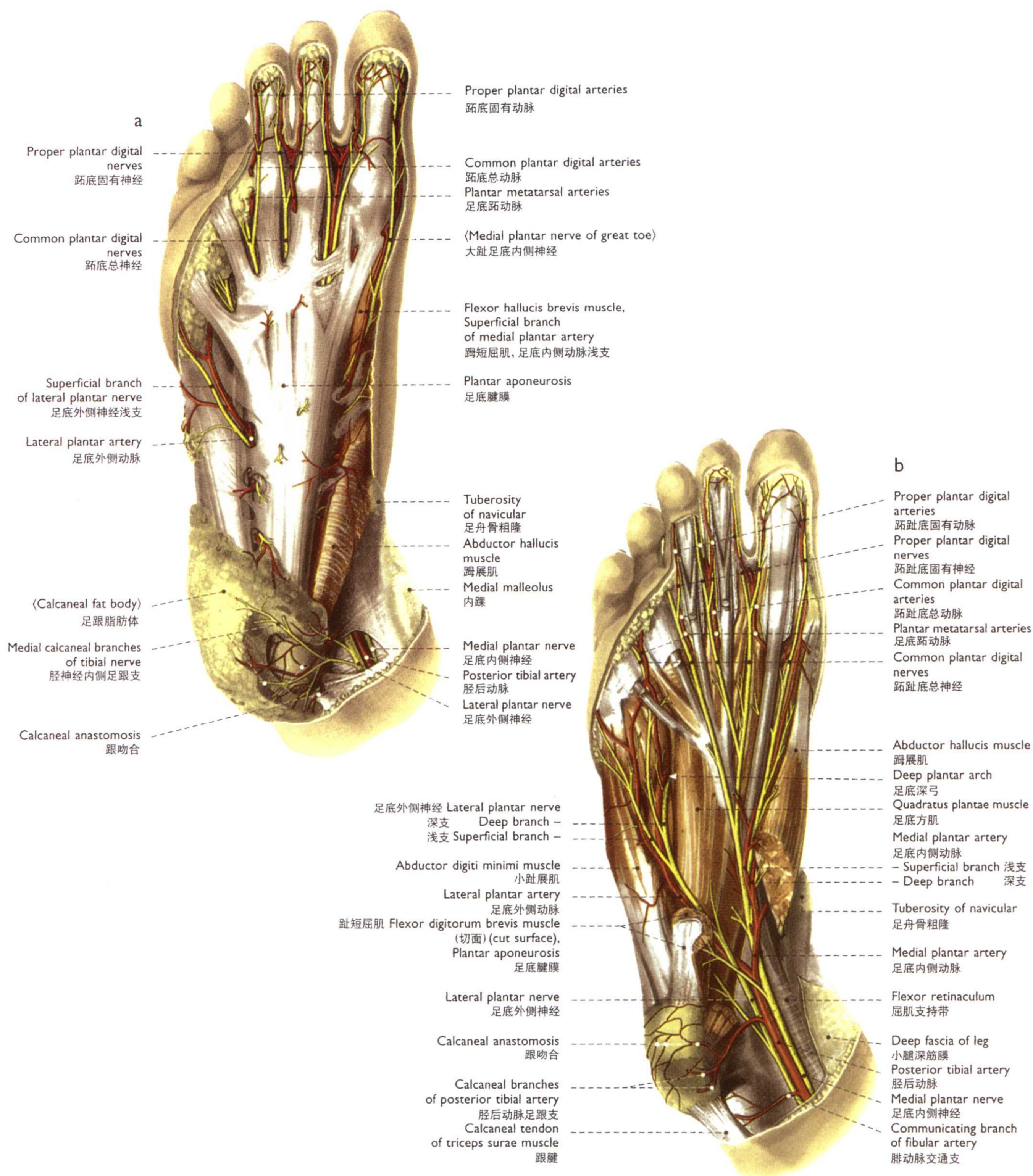


278 Blood vessels and nerves of the dorsum
of the right foot (50%) 右足背血管、神经

Ventral aspect 前面观

a Subcutaneous veins and nerves 浅静脉和皮神经

b Arteries and nerves after removal of the dorsal fascia of foot 足背筋膜被去除后的动脉、神经

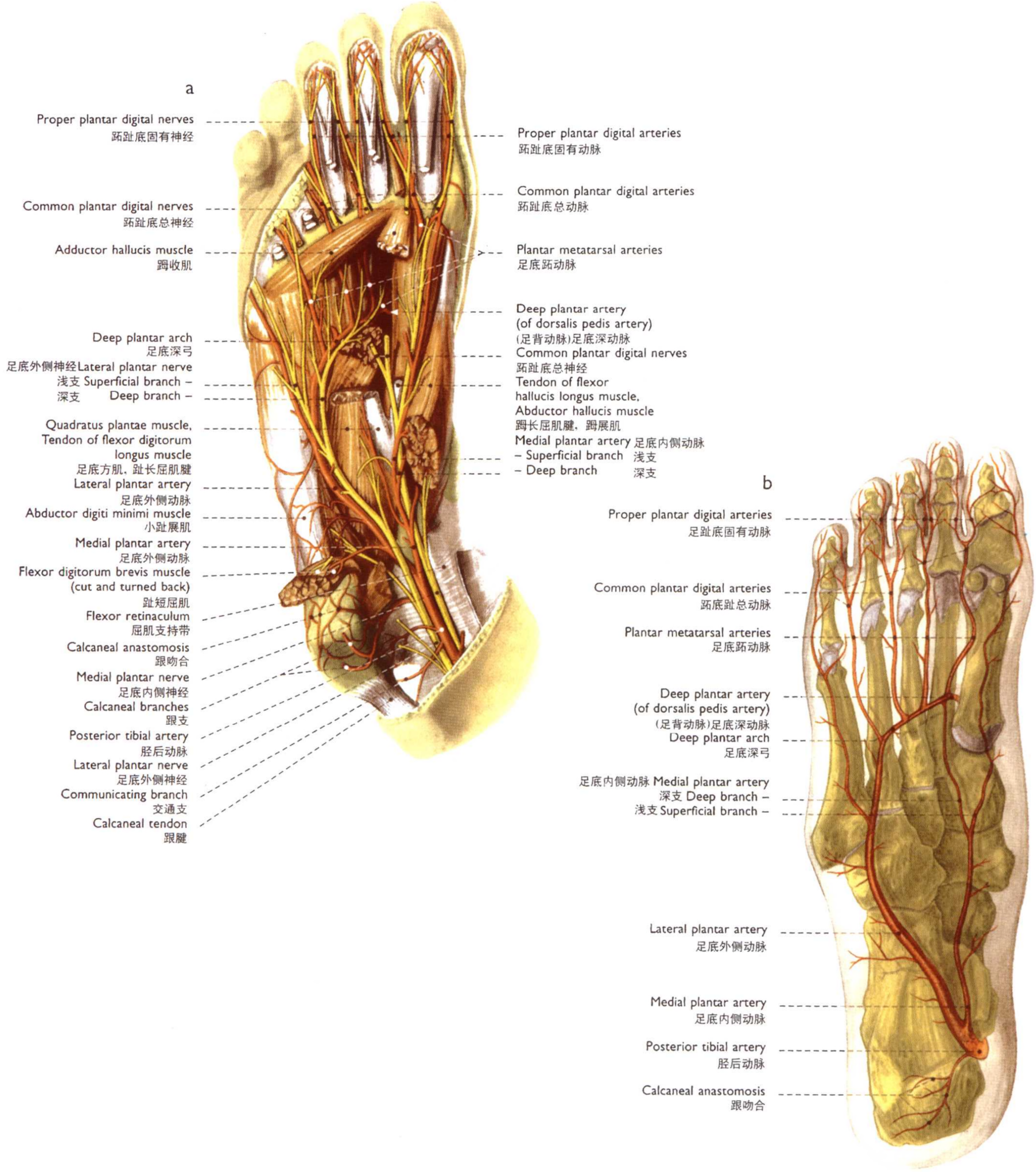


279 Arteries and nerves of the sole of the right foot (50%) 右足跖动脉、神经

Plantar aspect 足底面观

a Superficial layer 浅层

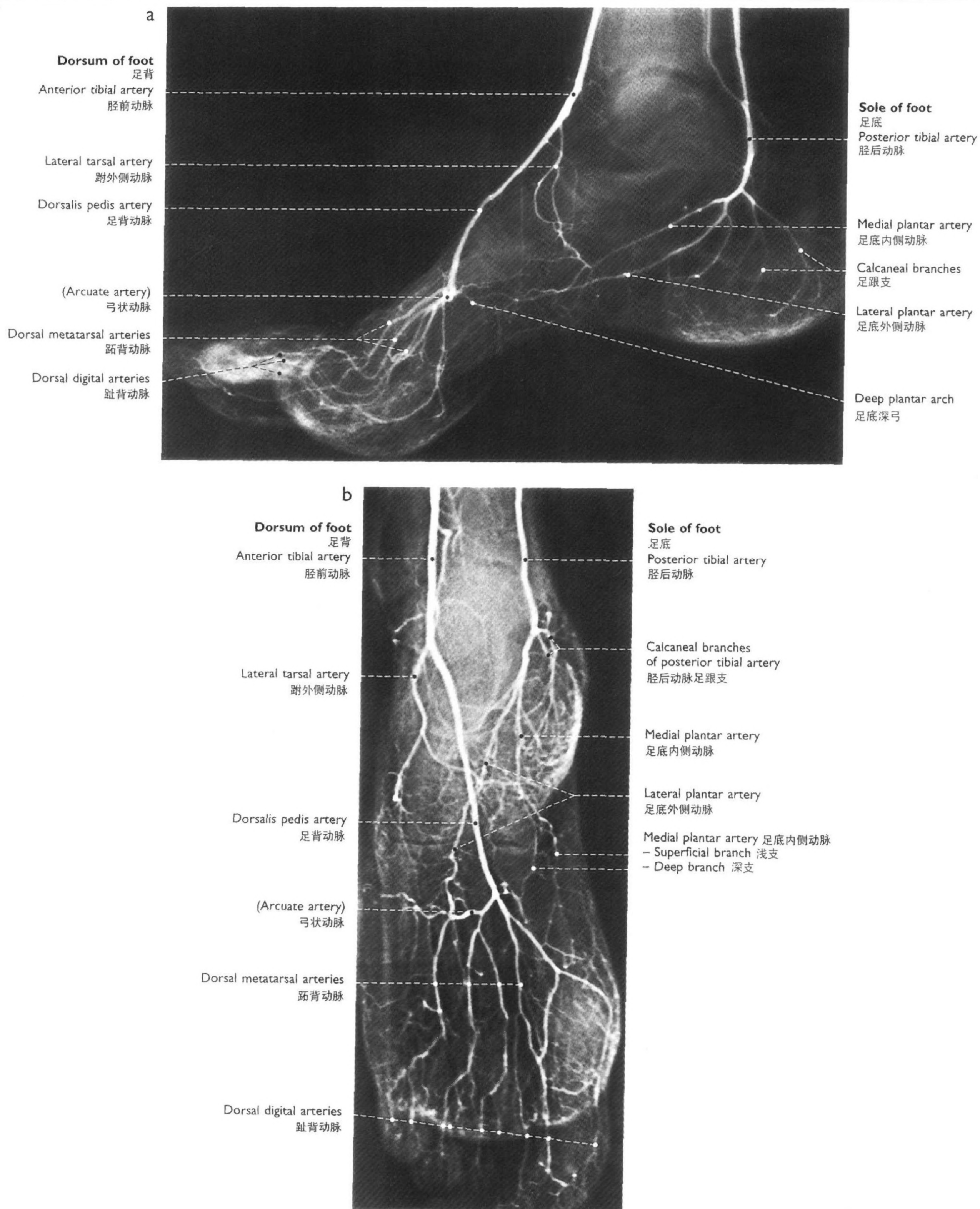
b The abductor hallucis muscle and the short flexor muscle of toes were partially removed. 跖展肌、趾短屈肌被部分去除



280 Arteries and nerves of the sole of the right foot (50%) 右足趾动脉、神经

Plantar aspect 跖底面观

- a The oblique head of the abductor hallucis muscle and the short flexor muscle of toes were partially removed. 拇展肌斜头和趾短屈肌部分被切除
- b Arteries of the sole of the right foot, schematic representation 右足趾动脉、示意图



281 Arteries of the right foot (45%) 右足动脉

- a Lateromedial arteriogram 外内位动脉造影图
- b Dorsoplantar (anteroposterior) arteriogram
of the arteries of the right foot 右足动脉背底位(前后位)动脉造影图